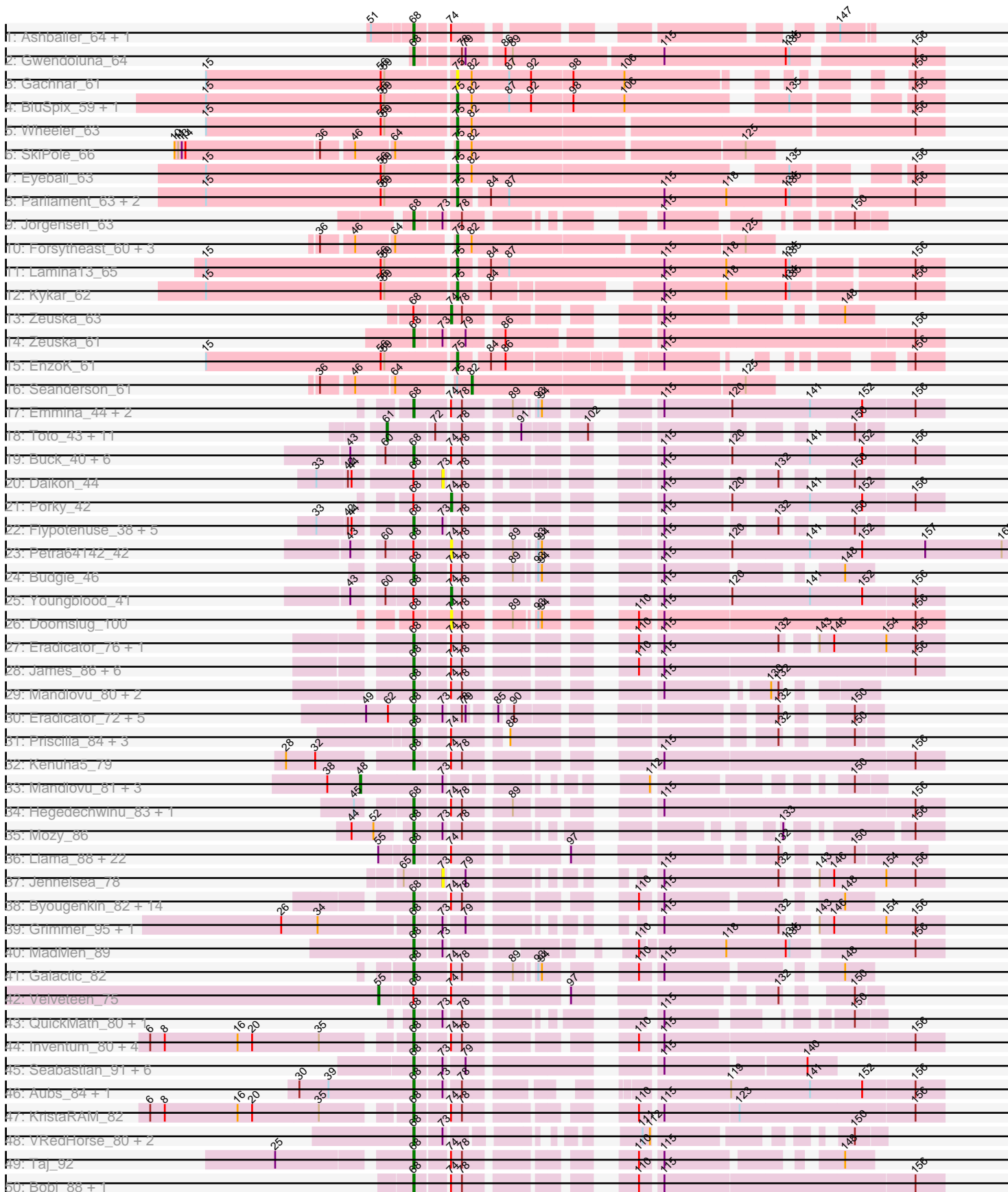
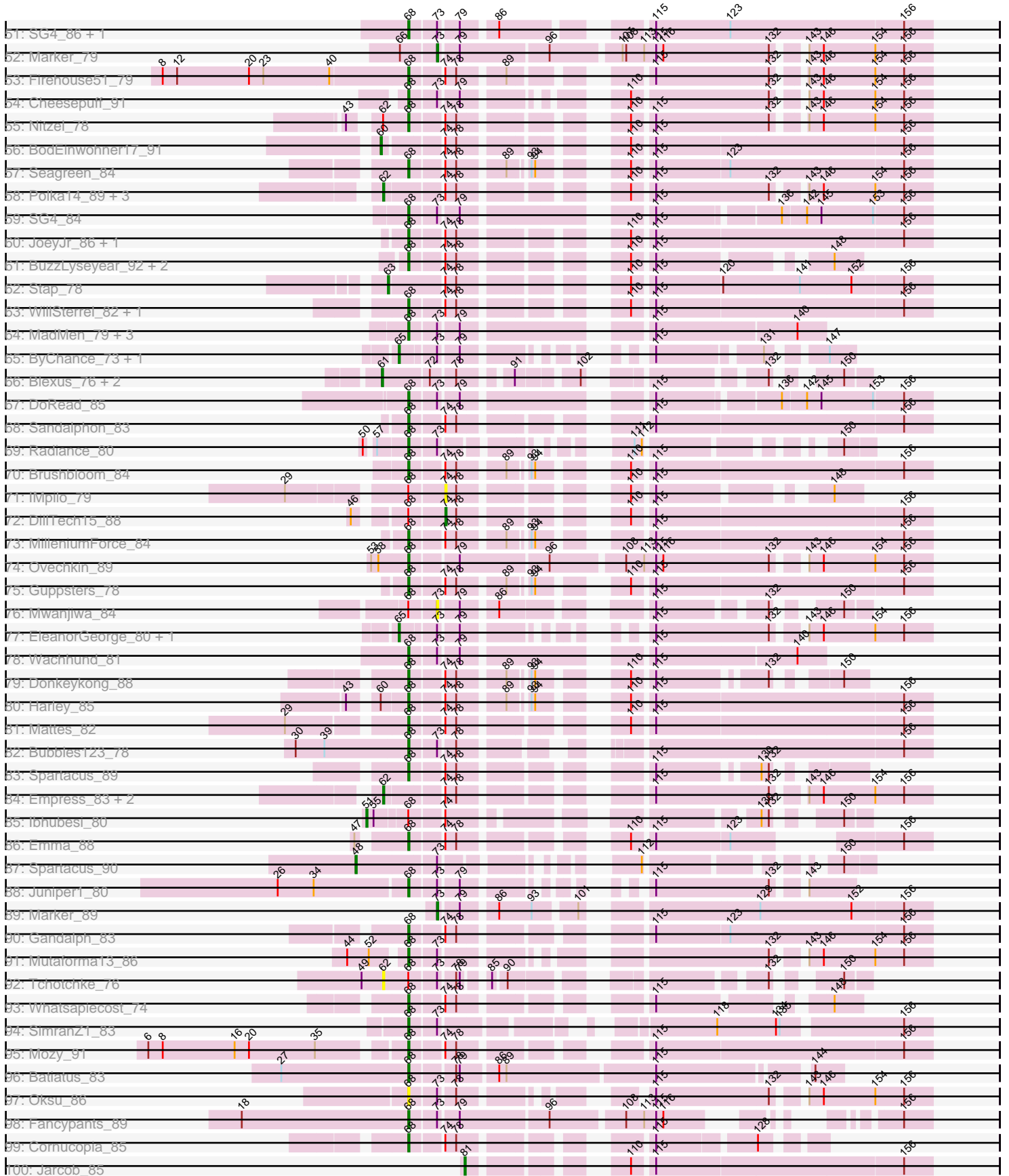


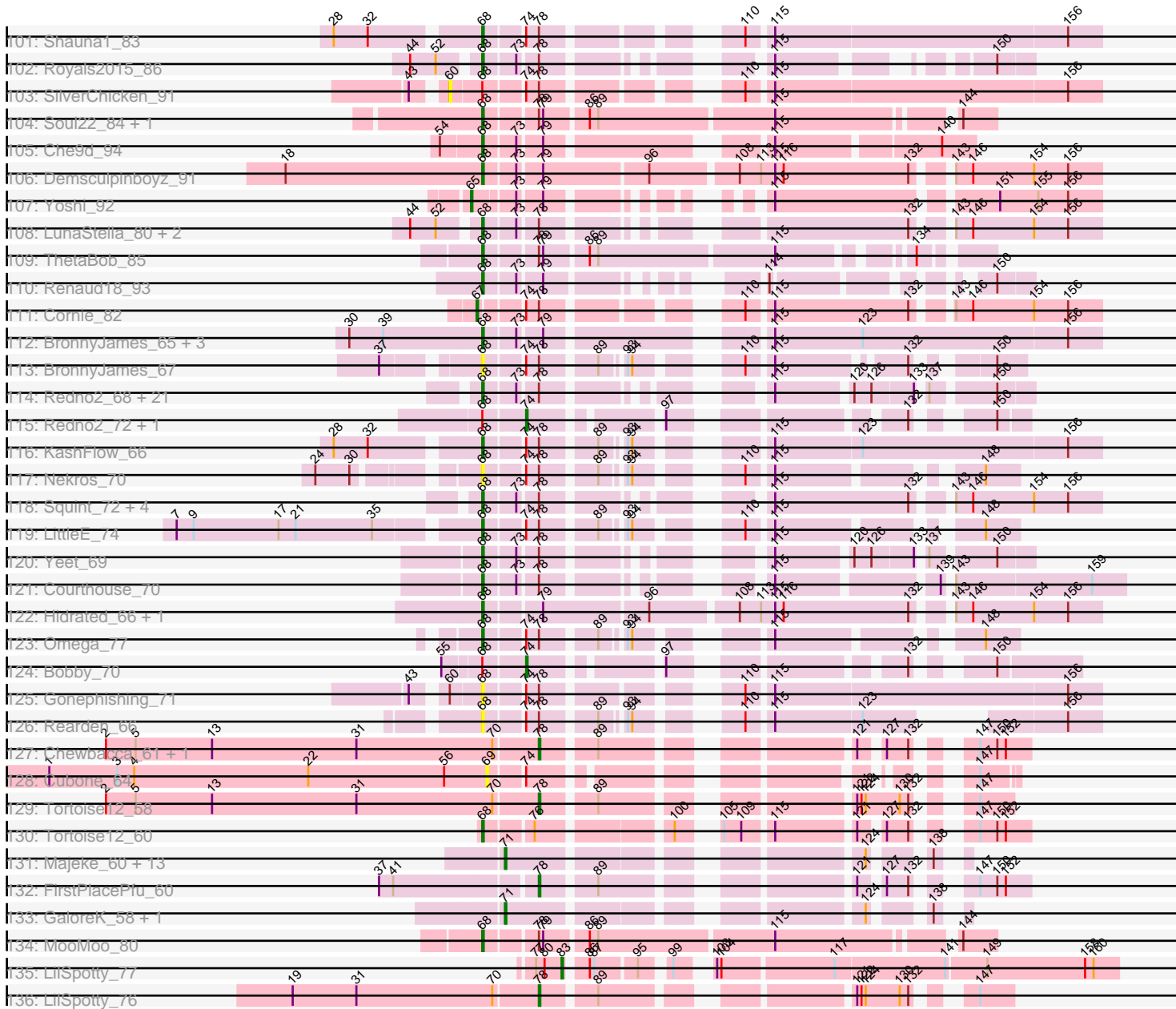
Pham 311156



Pham 311156



Pham 311156



r01: Shauna1_83	28	32	68	74	78	110	115	156											
r02: Royals2015_86	44	52	68	74	78	110	115	156											
r03: SilverChicken_91	68	74	78	88	96	110	115	156											
r04: Soul22_84 + 1	54	68	74	78	110	115	156												
r05: Che9d_94	18	68	74	78	96	100	104	108	110	115	132	140	144	150	156				
r06: Demsculpinboyz_91	68	74	78	88	96	110	115	156											
r07: Yoshi_92	44	52	68	74	78	110	115	156											
r08: LunaStella_80 + 2	68	74	78	88	96	110	115	156											
r09: ThetaBob_85	68	74	78	88	96	110	115	156											
r10: Renaud18_93	61	68	74	78	110	115	144	150	156										
r11: Cornie_82	30	36	68	74	78	110	115	123	132	140	146	151	156						
r12: BronnyJames_65 + 3	34	37	68	74	78	88	96	110	115	132	150	156							
r13: BronnyJames_67	68	74	78	88	96	110	115	120	126	132	150	156							
r14: Redno2_68 + 21	68	74	78	88	96	110	115	120	126	132	150	156							
r15: Redno2_72 + 1	68	74	78	88	96	97	110	115	120	126	132	150	156						
r16: KashFlow_66	24	28	30	32	68	74	78	88	96	97	110	115	120	126	132	150	156		
r17: Nekros_70	68	74	78	88	96	110	115	120	126	132	140	146	151	156					
r18: Squim_72 + 4	1	9	11	21	35	68	74	78	88	96	110	115	120	126	132	140	146	151	156
r19: LittleE_74	68	74	78	88	96	110	115	120	126	132	133	137	140	146	150	156			
r20: Yeet_69	68	74	78	88	96	110	115	120	126	132	133	137	140	146	150	156			
r21: Courthouse_70	68	74	78	88	96	100	104	108	110	115	132	140	146	151	156				
r22: Hydrated_66 + 1	68	74	78	88	96	110	115	120	126	132	140	146	151	156					
r23: Omega_77	68	74	78	88	96	110	115	120	126	132	150	156							
r24: Bobby_70	68	74	78	88	96	110	115	120	126	132	150	156							
r25: Gonephishing_71	68	74	78	88	96	110	115	120	126	132	150	156							
r26: Rearder_68	13	31	68	74	78	88	96	110	115	120	126	132	140	146	151	156			
r27: Chewbacca_61 + 1	54	68	74	78	88	96	110	115	120	126	132	140	146	151	156				
r28: Cubone_64	13	22	31	36	68	74	78	88	96	110	115	120	126	132	140	146	151	156	
r29: Tortoise12_58	68	70	74	78	88	100	104	108	110	115	120	126	132	140	146	151	156		
r30: Tortoise12_60	68	70	74	78	88	100	104	108	110	115	120	126	132	140	146	151	156		
r31: Majek_60 + 13	31	41	68	74	78	88	96	110	115	120	126	132	140	146	151	156			
r32: FirstPlacePlu_60	68	74	78	88	96	110	115	120	126	132	140	146	151	156					
r33: GaioreK_58 + 1	68	74	78	88	96	110	115	120	126	132	140	146	151	156					
r34: MooMoo_80	68	74	78	88	96	98	104	108	110	115	117	120	126	132	140	144	148	156	
r35: LiiSpotty_77	10	31	68	74	78	88	96	98	104	108	110	115	117	120	126	132	140	148	156
r36: LiiSpotty_76	68	74	78	88	96	110	115	120	126	132	140	148	156						

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 311156 Report

This analysis was run 06/27/26 on database version 652.

Pham number 311156 has 305 members, 28 are drafts.

Phages represented in each track:

- Track 1 : Ashballer\_64, JC27\_64
- Track 2 : Gwendoluna\_64
- Track 3 : Gachnar\_61
- Track 4 : BluSpix\_59, IgnatiusPatJac\_61
- Track 5 : Wheeler\_63
- Track 6 : SkiPole\_66
- Track 7 : Eyeball\_63
- Track 8 : Parliament\_63, Paphu\_61, Tasp14\_65
- Track 9 : Jorgensen\_63
- Track 10 : Forsytheast\_60, Moose\_60, SwissCheese\_62, Bruns\_60
- Track 11 : Lamina13\_65
- Track 12 : Kykar\_62
- Track 13 : Zeuska\_63
- Track 14 : Zeuska\_61
- Track 15 : EnzoK\_61
- Track 16 : Seanderson\_61
- Track 17 : Emmina\_44, Teaspoon\_45, NonchalantPear\_44
- Track 18 : Toto\_43, ABCat\_42, Inca\_41, BilboSwaggins\_43, Tuco\_45, CrystalP\_44, Myrale\_44, StellaBean\_42, IHOP\_42, Phaja\_42, ShamWow\_44, Marshmallow\_43
- Track 19 : Buck\_40, TeamEdward\_41, Elite2014\_40, Lilpickle\_40, Rimmer\_40, ChosenOne\_41, StormChicken\_41
- Track 20 : Daikon\_44
- Track 21 : Porky\_42
- Track 22 : Flypotenuse\_38, Glexan\_41, Traaww1\_40, Balomoji\_42, Gator\_41, Harella\_43
- Track 23 : Petra64142\_42
- Track 24 : Budgie\_46
- Track 25 : Youngblood\_41
- Track 26 : Doomslug\_100
- Track 27 : Eradicator\_76, Violac\_87
- Track 28 : James\_86, Phanphagia\_84, Flathead\_85, ShiLan\_85, OlympiaSaint\_85, Moonbeam\_83, Spoonbill\_81
- Track 29 : Mandlovu\_80, Hlubikazi\_80, Strokeseat\_80
- Track 30 : Eradicator\_72, KashFlow\_68, Cali\_17, Sprinklers\_16, BadAgartude\_17, SuperGrey\_82
- Track 31 : Priscilla\_84, NormanBulbieJr\_82, Koella\_76, Spartacus\_87
- Track 32 : Kenuha5\_79

- Track 33 : Mandlovu\_81, Hlubikazi\_81, Hades\_81, Strokeseat\_81
- Track 34 : Hegedechwinu\_83, JalFarm20\_90
- Track 35 : Mozy\_86
- Track 36 : Llama\_88, Ochi17\_87, Beelzebub\_12, FeliMaine\_10, Lilbit\_10, Marvin\_8, OfUltron\_89, Pringar\_9, BAKA\_82, Duke13\_80, LittleLaf\_9, Corazon\_9, Guppsters\_76, Jinglebell\_88, Zerg\_82, Huphlepuuff\_10, Clarkson\_10, Minerva\_79, Pound\_77, Sebastian\_89, Nichirin\_81, JoieB\_10, Modragons\_86
- Track 37 : Jennelsea\_78
- Track 38 : Byougenkin\_82, Royals2015\_90, Tweety\_86, Quico\_91, PopTart\_77, Phalconet\_82, Wee\_91, PhesterPhotato\_89, Eish\_88, Blexus\_80, Girafales\_91, SassyB\_77, Medindi\_89, Florinda\_94, DeadP\_86
- Track 39 : Grimmer\_95, Mahavrat\_81
- Track 40 : MadMen\_89
- Track 41 : Galactic\_82
- Track 42 : Velveteen\_75
- Track 43 : QuickMath\_80, Juice456\_78
- Track 44 : Inventum\_80, RedBird\_83, Ramsey\_86, Dorothy\_83, Sassafras\_83
- Track 45 : Sebastian\_91, OfUltron\_91, Nichirin\_83, Ochi17\_89, Jinglebell\_90, Llama\_90, Modragons\_88
- Track 46 : Aubs\_84, Donkeykong\_90
- Track 47 : KristaRAM\_82
- Track 48 : VRedHorse\_80, Pacc40\_73, Cornucopia\_81
- Track 49 : Taj\_92
- Track 50 : Bobi\_88, DaWorst\_83
- Track 51 : SG4\_86, Whatsapiecost\_76
- Track 52 : Marker\_79
- Track 53 : Firehouse51\_79
- Track 54 : Cheesepuff\_91
- Track 55 : Nitzel\_78
- Track 56 : BodEinwohner17\_91
- Track 57 : Seagreen\_84
- Track 58 : Polka14\_89, Tootsieroll\_80, KingMidas\_84, Scottish\_83
- Track 59 : SG4\_84
- Track 60 : JoeyJr\_86, Leperchaun\_84
- Track 61 : BuzzLyseyear\_92, Krakatau\_77, Job42\_84
- Track 62 : Stap\_78
- Track 63 : WillSterrel\_82, IrishSherpFalk\_83
- Track 64 : MadMen\_79, Karhdo\_80, Sabbb\_83, Kersh\_83
- Track 65 : ByChance\_73, ShowerHandel\_82
- Track 66 : Blexus\_76, Pippy\_76, Leozinho\_79
- Track 67 : DoRead\_85
- Track 68 : Sandalphon\_83
- Track 69 : Radiance\_80
- Track 70 : Brushbloom\_84
- Track 71 : IMpilo\_79
- Track 72 : DillTech15\_88
- Track 73 : MilleniumForce\_84
- Track 74 : Ovechkin\_89
- Track 75 : Guppsters\_78
- Track 76 : Mwanjiwa\_84
- Track 77 : EleanorGeorge\_80, Zizzle\_86
- Track 78 : Wachhund\_81
- Track 79 : Donkeykong\_88

- Track 80 : Harley\_85
- Track 81 : Mattes\_82
- Track 82 : Bubbles123\_78
- Track 83 : Spartacus\_89
- Track 84 : Empress\_83, Doomphist\_88, Poenanya\_88
- Track 85 : lbhubesi\_80
- Track 86 : Emma\_88
- Track 87 : Spartacus\_90
- Track 88 : Juniper1\_80
- Track 89 : Marker\_89
- Track 90 : Gandalph\_83
- Track 91 : Mutaforma13\_86
- Track 92 : Tchotchke\_76
- Track 93 : Whatsapiecost\_74
- Track 94 : SimranZ1\_83
- Track 95 : Mozy\_91
- Track 96 : Batiatus\_83
- Track 97 : Oksu\_86
- Track 98 : Fancypants\_89
- Track 99 : Cornucopia\_85
- Track 100 : Jarcob\_85
- Track 101 : Shauna1\_83
- Track 102 : Royals2015\_86
- Track 103 : SilverChicken\_91
- Track 104 : Soul22\_84, Llij\_80
- Track 105 : Che9d\_94
- Track 106 : Demsculpinboyz\_91
- Track 107 : Yoshi\_92
- Track 108 : LunaStella\_80, TChen\_82, ShroomBoi\_82
- Track 109 : ThetaBob\_85
- Track 110 : Renaud18\_93
- Track 111 : Cornie\_82
- Track 112 : BronnyJames\_65, Hannaconda\_68, Shaboozey\_64, SuperGrey\_84
- Track 113 : BronnyJames\_67
- Track 114 : Redno2\_68, Pound\_75, Kalah2\_66, DmpstrDiver\_71, Superphikiman\_69, Beem\_71, JuicyJay\_70, NihilNomen\_72, Ejimix\_71, Halley\_73, Marleymoo\_65, Dallas\_70, Odette\_70, Minerva\_77, Klein\_71, Lucky2013\_69, Wanda\_75, ThreeRngTarjay\_69, Hughesyang\_70, Schatzie\_66, HokkenD\_64, Zelink\_69
- Track 115 : Redno2\_72, Lucky2013\_73
- Track 116 : KashFlow\_66
- Track 117 : Nekros\_70
- Track 118 : Squint\_72, Phoebus\_74, Ariel\_71, Porcelain\_71, MiaZeal\_72
- Track 119 : LittleE\_74
- Track 120 : Yeet\_69
- Track 121 : Courthouse\_70
- Track 122 : Hidrated\_66, Bobby\_68
- Track 123 : Omega\_77
- Track 124 : Bobby\_70
- Track 125 : Gonephishing\_71
- Track 126 : Rearden\_66
- Track 127 : Chewbacca\_61, ZenTime222\_56
- Track 128 : Cubone\_64

- Track 129 : Tortoise12\_58
- Track 130 : Tortoise12\_60
- Track 131 : Majeke\_60, Venti\_55, Zilizebeth\_60, Phegasus\_60, Chubbello\_54, FirstPlacePfu\_56, Kari\_54, Etoile\_54, Langerak\_55, Donovan\_54, Arib1\_56, Fishburne\_54, Bartholomew\_54, Mangethe\_60
- Track 132 : FirstPlacePfu\_60
- Track 133 : GaloreK\_58, Techage\_55
- Track 134 : MooMoo\_80
- Track 135 : LilSpotty\_77
- Track 136 : LilSpotty\_76

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

The start number called the most often in the published annotations is 68, it was called in 194 of the 277 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Ariel\_71, Ashballer\_64, Aubs\_84, BAKA\_82, BadAgartude\_17, Balomoji\_42, Batiatus\_83, Beelzebub\_12, Beem\_71, Blexus\_80, Bobby\_68, Bobi\_88, BronnyJames\_65, BronnyJames\_67, Brushbloom\_84, Bubbles123\_78, Buck\_40, Budgie\_46, BuzzLyseyear\_92, Byougenkin\_82, Cali\_17, Che9d\_94, Cheesepuff\_91, ChosenOne\_41, Clarkson\_10, Corazon\_9, Cornucopia\_81, Cornucopia\_85, Courthouse\_70, DaWorst\_83, Dallas\_70, DeadP\_86, Demsculpinboyz\_91, DmpstrDiver\_71, DoRead\_85, Donkeykong\_88, Donkeykong\_90, Dorothy\_83, Duke13\_80, Eish\_88, Ejimix\_71, Elite2014\_40, Emma\_88, Emmina\_44, Eradicator\_72, Eradicator\_76, Fancypants\_89, FeliMaine\_10, Firehouse51\_79, Flathead\_85, Florinda\_94, Flypotenuse\_38, Galactic\_82, Gandolph\_83, Gator\_41, Girafales\_91, Glexan\_41, Gonephishing\_71, Grimmer\_95, Guppsters\_76, Guppsters\_78, Gwendoluna\_64, Halley\_73, Hannaconda\_68, Harella\_43, Harley\_85, Hegedechwinu\_83, Hidrated\_66, Hlubikazi\_80, HokkenD\_64, Hughesyang\_70, Huphlepuuff\_10, Inventum\_80, IrishSherpFalk\_83, JC27\_64, JalFarm20\_90, James\_86, Jinglebell\_88, Jinglebell\_90, Job42\_84, JoeyJr\_86, JoieB\_10, Jorgensen\_63, Juice456\_78, JuicyJay\_70, Juniper1\_80, Kalah2\_66, Karhdo\_80, KashFlow\_66, KashFlow\_68, Kenuha5\_79, Kersh\_83, Klein\_71, Koella\_76, Krakatau\_77, KristaRAM\_82, Leperchaun\_84, Lilbit\_10, Lilpickle\_40, LittleE\_74, LittleLaf\_9, Llama\_88, Llama\_90, Llij\_80, Lucky2013\_69, LunaStella\_80, MadMen\_79, MadMen\_89, Mahavrat\_81, Mandlovu\_80, Marleymoo\_65, Marvin\_8, Mattes\_82, Medindi\_89, MiaZeal\_72, MilleniumForce\_84, Minerva\_77, Minerva\_79, Modragons\_86, Modragons\_88, MooMoo\_80, Moonbeam\_83, Mozy\_86, Mozy\_91, Mutaforma13\_86, Nekros\_70, Nichirin\_81, Nichirin\_83, NihilNomen\_72, Nitzel\_78, NonchalantPear\_44, NormanBulbieJr\_82, Ochi17\_87, Ochi17\_89, Odette\_70, OfUltron\_89, OfUltron\_91, Oksu\_86, OlympiaSaint\_85, Omega\_77, Ovechkin\_89, Pacc40\_73, Phalconet\_82, Phanphagia\_84, PhesterPhotato\_89, Phoebus\_74, PopTart\_77, Porcelain\_71, Pound\_75, Pound\_77, Pringar\_9, Priscilla\_84, QuickMath\_80, Quico\_91, Radiance\_80, Ramsey\_86, Rearden\_66, RedBird\_83, Redno2\_68, Renaud18\_93, Rimmer\_40, Royals2015\_86, Royals2015\_90, SG4\_84, SG4\_86, Sabbb\_83, Sandalphon\_83, Sassafras\_83, SassyB\_77, Schatzie\_66, Sebastian\_89, Sebastian\_91, Seagreen\_84, Shaboozey\_64, Shauna1\_83, ShiLan\_85, ShroomBoi\_82, SimranZ1\_83, Soul22\_84, Spartacus\_87, Spartacus\_89, Spoonbill\_81, Sprinklers\_16, Squint\_72, StormChicken\_41, Strokeseat\_80,

SuperGrey\_82, SuperGrey\_84, Superphikiman\_69, TChen\_82, Taj\_92, TeamEdward\_41, Teaspoon\_45, ThetaBob\_85, ThreeRngTarjay\_69, Tortoise12\_60, Traaww1\_40, Tweety\_86, VRedHorse\_80, Violac\_87, Wachhund\_81, Wanda\_75, Wee\_91, Whatsapiecost\_74, Whatsapiecost\_76, WillSterrel\_82, Yeet\_69, Zelink\_69, Zerg\_82, Zeuska\_61,

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

- Bobby\_70, Daikon\_44, DillTech15\_88, Doomslug\_100, IMpilo\_79, Ibhubesi\_80, Lucky2013\_73, Mwanjiwa\_84, Petra64142\_42, Porky\_42, Redno2\_72, SilverChicken\_91, Tchotchke\_76, Velveteen\_75, Youngblood\_41, Zeuska\_63,

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

- ABCat\_42, Arib1\_56, Bartholomew\_54, BilboSwaggins\_43, Blexus\_76, BluSpix\_59, BodEinwohner17\_91, Bruns\_60, ByChance\_73, Chewbacca\_61, Chubbello\_54, Cornie\_82, CrystalP\_44, Cubone\_64, Donovan\_54, Doomphist\_88, EleanorGeorge\_80, Empress\_83, EnzoK\_61, Etoile\_54, Eyeball\_63, FirstPlacePfu\_56, FirstPlacePfu\_60, Fishburne\_54, Forsytheast\_60, Gachnar\_61, GaloreK\_58, Hades\_81, Hlubikazi\_81, IHOP\_42, IgnatiusPatJac\_61, Inca\_41, Jarcob\_85, Jennelsea\_78, Kari\_54, KingMidas\_84, Kykar\_62, Lamina13\_65, Langerak\_55, Leozinho\_79, LilSpotty\_76, LilSpotty\_77, Majeke\_60, Mandlovu\_81, Mangethe\_60, Marker\_79, Marker\_89, Marshmallow\_43, Moose\_60, Myrale\_44, Paphu\_61, Parliament\_63, Phaja\_42, Phegasus\_60, Pippy\_76, Poenanya\_88, Polka14\_89, Scottish\_83, Seanderson\_61, ShamWow\_44, ShowerHandel\_82, SkiPole\_66, Spartacus\_90, Stap\_78, StellaBean\_42, Strokeseat\_81, SwissCheese\_62, Tasp14\_65, Techage\_55, Tootsieroll\_80, Tortoise12\_58, Toto\_43, Tuco\_45, Venti\_55, Wheeler\_63, Yoshi\_92, ZenTime222\_56, Zilizebeth\_60, Zizzle\_86,

### Summary by start number:

Start 48:

- Found in 5 of 305 ( 1.6% ) of genes in pham
- Manual Annotations of this start: 5 of 277
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Hades\_81 (F1), Hlubikazi\_81 (F1), Mandlovu\_81 (F1), Spartacus\_90 (F1), Strokeseat\_81 (F1),

Start 51:

- Found in 3 of 305 ( 1.0% ) of genes in pham
- Manual Annotations of this start: 1 of 277
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Ibhubesi\_80 (F1),

Start 55:

- Found in 26 of 305 ( 8.5% ) of genes in pham
- Manual Annotations of this start: 1 of 277
- Called 3.8% of time when present
- Phage (with cluster) where this start called: Velveteen\_75 (F1),

Start 60:

- Found in 13 of 305 ( 4.3% ) of genes in pham
- Manual Annotations of this start: 1 of 277
- Called 15.4% of time when present

- Phage (with cluster) where this start called: BodEinwohner17\_91 (F1), SilverChicken\_91 (F2),

#### Start 61:

- Found in 15 of 305 ( 4.9% ) of genes in pham
- Manual Annotations of this start: 15 of 277
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ABCat\_42 (E), BilboSwaggins\_43 (E), Blexus\_76 (F1), CrystalP\_44 (E), IHOP\_42 (E), Inca\_41 (E), Leozinho\_79 (F1), Marshmallow\_43 (E), Myrale\_44 (E), Phaja\_42 (E), Pippy\_76 (F1), ShamWow\_44 (E), StellaBean\_42 (E), Toto\_43 (E), Tuco\_45 (E),

#### Start 62:

- Found in 15 of 305 ( 4.9% ) of genes in pham
- Manual Annotations of this start: 7 of 277
- Called 53.3% of time when present
- Phage (with cluster) where this start called: Doomphist\_88 (F1), Empress\_83 (F1), KingMidas\_84 (F1), Poenanya\_88 (F1), Polka14\_89 (F1), Scottish\_83 (F1), Tchotchke\_76 (F1), Tootsieroll\_80 (F1),

#### Start 63:

- Found in 1 of 305 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 277
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Stap\_78 (F1),

#### Start 65:

- Found in 6 of 305 ( 2.0% ) of genes in pham
- Manual Annotations of this start: 5 of 277
- Called 83.3% of time when present
- Phage (with cluster) where this start called: ByChance\_73 (F1), EleanorGeorge\_80 (F1), ShowerHandel\_82 (F1), Yoshi\_92 (F2), Zizzle\_86 (F1),

#### Start 67:

- Found in 1 of 305 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 277
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Cornie\_82 (F5),

#### Start 68:

- Found in 226 of 305 ( 74.1% ) of genes in pham
- Manual Annotations of this start: 194 of 277
- Called 92.9% of time when present
- Phage (with cluster) where this start called: Ariel\_71 (J), Ashballer\_64 (A1), Aubs\_84 (F1), BAKA\_82 (J), BadAgartude\_17 (C1), Balomoji\_42 (E), Batiatus\_83 (F1), Beelzebub\_12 (S), Beem\_71 (J), Blexus\_80 (F1), Bobby\_68 (J), Bobi\_88 (F1), BronnyJames\_65 (J), BronnyJames\_67 (J), Brushbloom\_84 (F1), Bubbles123\_78 (F1), Buck\_40 (E), Budgie\_46 (E), BuzzLyseyear\_92 (F1), Byougenkin\_82 (F1), Cali\_17 (C1), Che9d\_94 (F2), Cheesepuff\_91 (F1), ChosenOne\_41 (E), Clarkson\_10 (S), Corazon\_9 (S), Cornucopia\_81 (F1), Cornucopia\_85 (F1), Courthouse\_70 (J), DaWorst\_83 (F1), Dallas\_70 (J), DeadP\_86 (F1), Demsculpinboyz\_91 (F2), DmpstrDiver\_71 (J), DoRead\_85 (F1), Donkeykong\_88 (F1), Donkeykong\_90 (F1), Dorothy\_83 (F1), Duke13\_80 (J), Eish\_88 (F1), Ejimix\_71 (J), Elite2014\_40 (E),

Emma\_88 (F1), Emmina\_44 (E), Eradicator\_72 (F1), Eradicator\_76 (F1), Fancypants\_89 (F1), FeliMaine\_10 (S), Firehouse51\_79 (F1), Flathead\_85 (F1), Florinda\_94 (F1), Flypotenuse\_38 (E), Galactic\_82 (F1), Gandolph\_83 (F1), Gator\_41 (E), Girafales\_91 (F1), Glexan\_41 (E), Gonephishing\_71 (J), Grimmer\_95 (F1), Guppsters\_76 (F1), Guppsters\_78 (F1), Gwendoluna\_64 (A1), Halley\_73 (J), Hannaconda\_68 (J), Harella\_43 (E), Harley\_85 (F1), Hegedechwinu\_83 (F1), Hidrated\_66 (J), Hlubikazi\_80 (F1), HokkenD\_64 (J), Hughesyang\_70 (J), Huphlepuuff\_10 (S), Inventum\_80 (F1), IrishSherpFalk\_83 (F1), JC27\_64 (A1), JalFarm20\_90 (F1), James\_86 (F1), Jinglebell\_88 (F1), Jinglebell\_90 (F1), Job42\_84 (F1), JoeyJr\_86 (F1), JoieB\_10 (S), Jorgensen\_63 (A1), Juice456\_78 (F1), JuicyJay\_70 (J), Juniper1\_80 (F1), Kalah2\_66 (J), Karhdo\_80 (F1), KashFlow\_66 (J), KashFlow\_68 (J), Kenuha5\_79 (F1), Kersh\_83 (F1), Klein\_71 (J), Koella\_76 (F1), Krakatau\_77 (F1), KristaRAM\_82 (F1), Leperchaun\_84 (F1), Lilbit\_10 (S), Lilpickle\_40 (E), LittleE\_74 (J), LittleLaf\_9 (S), Llama\_88 (F1), Llama\_90 (F1), Llij\_80 (F1), Lucky2013\_69 (J), LunaStella\_80 (F4), MadMen\_79 (F1), MadMen\_89 (F1), Mahavrat\_81 (F1), Mandlovu\_80 (F1), Marleymoo\_65 (J), Marvin\_8 (S), Mattes\_82 (F1), Medindi\_89 (F1), MiaZeal\_72 (J), MilleniumForce\_84 (F1), Minerva\_77 (J), Minerva\_79 (J), Modragons\_86 (F1), Modragons\_88 (F1), MooMoo\_80 (singleton), Moonbeam\_83 (F1), Mozy\_86 (F1), Mozy\_91 (F1), Mutaforma13\_86 (F1), Nekros\_70 (J), Nichirin\_81 (F1), Nichirin\_83 (F1), NihilNomen\_72 (J), Nitzel\_78 (F1), NonchalantPear\_44 (E), NormanBulbieJr\_82 (F1), Ochi17\_87 (F1), Ochi17\_89 (F1), Odette\_70 (J), OfUltron\_89 (F1), OfUltron\_91 (F1), Oksu\_86 (F1), OlympiaSaint\_85 (F1), Omega\_77 (J), Ovechkin\_89 (F1), Pacc40\_73 (F1), Phalconet\_82 (F1), Phanphagia\_84 (F1), PhesterPhotato\_89 (F1), Phoebus\_74 (J), PopTart\_77 (F1), Porcelain\_71 (J), Pound\_75 (J), Pound\_77 (J), Pringar\_9 (S), Priscilla\_84 (F1), QuickMath\_80 (F1), Quico\_91 (F1), Radiance\_80 (F1), Ramsey\_86 (F1), Rearden\_66 (J), RedBird\_83 (F1), Redno2\_68 (J), Renaud18\_93 (F4), Rimmer\_40 (E), Royals2015\_86 (F1), Royals2015\_90 (F1), SG4\_84 (F1), SG4\_86 (F1), Sabbb\_83 (F1), Sandalphon\_83 (F1), Sassafras\_83 (F1), SassyB\_77 (F1), Schatzie\_66 (J), Sebastian\_89 (F1), Sebastian\_91 (F1), Seagreen\_84 (F1), Shaboozey\_64 (J), Shauna1\_83 (F1), ShiLan\_85 (F1), ShroomBoi\_82 (F1), SimranZ1\_83 (F1), Soul22\_84 (F2), Spartacus\_87 (F1), Spartacus\_89 (F1), Spoonbill\_81 (F1), Sprinklers\_16 (C1), Squint\_72 (J), StormChicken\_41 (E), Strokeseat\_80 (F1), SuperGrey\_82 (F1), SuperGrey\_84 (F1), Superphikiman\_69 (J), TChen\_82 (F4), Taj\_92 (F1), TeamEdward\_41 (E), Teaspoon\_45 (E), ThetaBob\_85 (F4), ThreeRngTarjay\_69 (J), Tortoise12\_60 (N), Traaww1\_40 (E), Tweety\_86 (F1), VRedHorse\_80 (F1), Violac\_87 (F1), Wachhund\_81 (F1), Wanda\_75 (J), Wee\_91 (F1), Whatsapiecost\_74 (F1), Whatsapiecost\_76 (F1), WillSterrel\_82 (F1), Yeet\_69 (J), Zelink\_69 (J), Zerg\_82 (F1), Zeuska\_61 (A1),

Start 69:

- Found in 1 of 305 ( 0.3% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Cubone\_64 (N),

Start 71:

- Found in 16 of 305 ( 5.2% ) of genes in pham
- Manual Annotations of this start: 14 of 277
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Arib1\_56 (P1), Bartholomew\_54 (P1), Chubbello\_54 (P1), Donovan\_54 (P1), Etoile\_54 (P1), FirstPlacePfu\_56 (P1), Fishburne\_54 (P1), GaloreK\_58 (P1), Kari\_54 (P1), Langerak\_55 (P1), Majeke\_60

(P1), Mangethe\_60 (P1), Phegasus\_60 (P1), Techage\_55 (P1), Venti\_55 (P1), Zilizebeth\_60 (P1),

Start 73:

- Found in 105 of 305 ( 34.4% ) of genes in pham
- Manual Annotations of this start: 2 of 277
- Called 4.8% of time when present
- Phage (with cluster) where this start called: Daikon\_44 (E), Jennelsea\_78 (F1), Marker\_79 (F1), Marker\_89 (F1), Mwanjiwa\_84 (F1),

Start 74:

- Found in 135 of 305 ( 44.3% ) of genes in pham
- Manual Annotations of this start: 7 of 277
- Called 7.4% of time when present
- Phage (with cluster) where this start called: Bobby\_70 (J), DillTech15\_88 (F1), Doomslug\_100 (F), IMpilo\_79 (F1), Lucky2013\_73 (J), Petra64142\_42 (E), Porky\_42 (E), Redno2\_72 (J), Youngblood\_41 (E), Zeuska\_63 (A1),

Start 75:

- Found in 17 of 305 ( 5.6% ) of genes in pham
- Manual Annotations of this start: 15 of 277
- Called 94.1% of time when present
- Phage (with cluster) where this start called: BluSpix\_59 (A1), Bruns\_60 (A1), EnzoK\_61 (A1), Eyeball\_63 (A1), Forsytheast\_60 (A1), Gachnar\_61 (A1), IgnatiusPatJac\_61 (A1), Kykar\_62 (A1), Lamina13\_65 (A1), Moose\_60 (A1), Paphu\_61 (A1), Parliament\_63 (A1), SkiPole\_66 (A1), SwissCheese\_62 (A1), Tasp14\_65 (A1), Wheeler\_63 (A1),

Start 78:

- Found in 181 of 305 ( 59.3% ) of genes in pham
- Manual Annotations of this start: 5 of 277
- Called 2.8% of time when present
- Phage (with cluster) where this start called: Chewbacca\_61 (N), FirstPlacePfu\_60 (P1), LilSpotty\_76 (singleton), Tortoise12\_58 (N), ZenTime222\_56 (T),

Start 81:

- Found in 1 of 305 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 277
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Jacob\_85 (F1),

Start 82:

- Found in 11 of 305 ( 3.6% ) of genes in pham
- Manual Annotations of this start: 1 of 277
- Called 9.1% of time when present
- Phage (with cluster) where this start called: Seanderson\_61 (A1),

Start 83:

- Found in 1 of 305 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 277
- Called 100.0% of time when present
- Phage (with cluster) where this start called: LilSpotty\_77 (singleton),

## Summary by clusters:

There are 14 clusters represented in this pham: F1, F2, P1, F4, F5, F, J, singleton, N, A1, S, T, E, C1,

Info for manual annotations of cluster A1:

- Start number 68 was manually annotated 5 times for cluster A1.
- Start number 74 was manually annotated 1 time for cluster A1.
- Start number 75 was manually annotated 15 times for cluster A1.
- Start number 82 was manually annotated 1 time for cluster A1.

Info for manual annotations of cluster C1:

- Start number 68 was manually annotated 3 times for cluster C1.

Info for manual annotations of cluster E:

- Start number 61 was manually annotated 12 times for cluster E.
- Start number 68 was manually annotated 15 times for cluster E.
- Start number 74 was manually annotated 2 times for cluster E.

Info for manual annotations of cluster F1:

- Start number 48 was manually annotated 5 times for cluster F1.
- Start number 51 was manually annotated 1 time for cluster F1.
- Start number 55 was manually annotated 1 time for cluster F1.
- Start number 60 was manually annotated 1 time for cluster F1.
- Start number 61 was manually annotated 3 times for cluster F1.
- Start number 62 was manually annotated 7 times for cluster F1.
- Start number 63 was manually annotated 1 time for cluster F1.
- Start number 65 was manually annotated 4 times for cluster F1.
- Start number 68 was manually annotated 115 times for cluster F1.
- Start number 73 was manually annotated 2 times for cluster F1.
- Start number 74 was manually annotated 1 time for cluster F1.
- Start number 81 was manually annotated 1 time for cluster F1.

Info for manual annotations of cluster F2:

- Start number 65 was manually annotated 1 time for cluster F2.
- Start number 68 was manually annotated 3 times for cluster F2.

Info for manual annotations of cluster F4:

- Start number 68 was manually annotated 4 times for cluster F4.

Info for manual annotations of cluster F5:

- Start number 67 was manually annotated 1 time for cluster F5.

Info for manual annotations of cluster J:

- Start number 68 was manually annotated 37 times for cluster J.
- Start number 74 was manually annotated 3 times for cluster J.

Info for manual annotations of cluster N:

- Start number 68 was manually annotated 1 time for cluster N.
- Start number 78 was manually annotated 2 times for cluster N.

Info for manual annotations of cluster P1:

- Start number 71 was manually annotated 14 times for cluster P1.
- Start number 78 was manually annotated 1 time for cluster P1.

Info for manual annotations of cluster S:

- Start number 68 was manually annotated 10 times for cluster S.

Info for manual annotations of cluster T:

- Start number 78 was manually annotated 1 time for cluster T.

### **Gene Information:**

Gene: ABCat\_42 Start: 36113, Stop: 35817, Start Num: 61

Candidate Starts for ABCat\_42:

(Start: 61 @36113 has 15 MA's), (72, 36077), (Start: 78 @36059 has 5 MA's), (91, 36026), (102, 35984), (150, 35837),

Gene: Arib1\_56 Start: 36638, Stop: 36877, Start Num: 71

Candidate Starts for Arib1\_56:

(Start: 71 @36638 has 14 MA's), (124, 36839), (138, 36866),

Gene: Ariel\_71 Start: 45936, Stop: 45583, Start Num: 68

Candidate Starts for Ariel\_71:

(Start: 68 @45936 has 194 MA's), (Start: 73 @45915 has 2 MA's), (Start: 78 @45903 has 5 MA's), (115, 45795), (132, 45702), (143, 45684), (146, 45672), (154, 45630), (156, 45606),

Gene: Ashballer\_64 Start: 41640, Stop: 41353, Start Num: 68

Candidate Starts for Ashballer\_64:

(Start: 51 @41670 has 1 MA's), (Start: 68 @41640 has 194 MA's), (Start: 74 @41616 has 7 MA's), (147, 41376),

Gene: Aubs\_84 Start: 50517, Stop: 50876, Start Num: 68

Candidate Starts for Aubs\_84:

(30, 50424), (39, 50448), (Start: 68 @50517 has 194 MA's), (Start: 73 @50538 has 2 MA's), (Start: 78 @50550 has 5 MA's), (119, 50706), (141, 50769), (152, 50811), (156, 50853),

Gene: BAKA\_82 Start: 52624, Stop: 52340, Start Num: 68

Candidate Starts for BAKA\_82:

(Start: 55 @52648 has 1 MA's), (Start: 68 @52624 has 194 MA's), (Start: 74 @52600 has 7 MA's), (97, 52525), (132, 52396), (150, 52360),

Gene: BadAgartude\_17 Start: 5514, Stop: 5792, Start Num: 68

Candidate Starts for BadAgartude\_17:

(49, 5475), (Start: 62 @5493 has 7 MA's), (Start: 68 @5514 has 194 MA's), (Start: 73 @5535 has 2 MA's), (Start: 78 @5547 has 5 MA's), (79, 5550), (85, 5565), (90, 5574), (132, 5736), (150, 5772),

Gene: Balomoji\_42 Start: 35703, Stop: 35428, Start Num: 68

Candidate Starts for Balomoji\_42:

(33, 35775), (42, 35751), (44, 35748), (Start: 68 @35703 has 194 MA's), (Start: 73 @35682 has 2 MA's), (Start: 78 @35670 has 5 MA's), (115, 35562), (132, 35484), (150, 35448),

Gene: Bartholomew\_54 Start: 36580, Stop: 36819, Start Num: 71

Candidate Starts for Bartholomew\_54:  
(Start: 71 @36580 has 14 MA's), (124, 36781), (138, 36808),

Gene: Batiatus\_83 Start: 49708, Stop: 50034, Start Num: 68  
Candidate Starts for Batiatus\_83:  
(27, 49603), (Start: 68 @49708 has 194 MA's), (Start: 78 @49741 has 5 MA's), (79, 49744), (86, 49771), (89, 49777), (115, 49897), (144, 50011),

Gene: Beelzebub\_12 Start: 3476, Stop: 3760, Start Num: 68  
Candidate Starts for Beelzebub\_12:  
(Start: 55 @3452 has 1 MA's), (Start: 68 @3476 has 194 MA's), (Start: 74 @3500 has 7 MA's), (97, 3575), (132, 3704), (150, 3740),

Gene: Beem\_71 Start: 50213, Stop: 49920, Start Num: 68  
Candidate Starts for Beem\_71:  
(Start: 68 @50213 has 194 MA's), (Start: 73 @50192 has 2 MA's), (Start: 78 @50180 has 5 MA's), (115, 50072), (120, 50024), (126, 50012), (133, 49985), (137, 49982), (150, 49943),

Gene: BilboSwaggins\_43 Start: 36121, Stop: 35825, Start Num: 61  
Candidate Starts for BilboSwaggins\_43:  
(Start: 61 @36121 has 15 MA's), (72, 36085), (Start: 78 @36067 has 5 MA's), (91, 36034), (102, 35992), (150, 35845),

Gene: Blexus\_76 Start: 48851, Stop: 49147, Start Num: 61  
Candidate Starts for Blexus\_76:  
(Start: 61 @48851 has 15 MA's), (72, 48887), (Start: 78 @48905 has 5 MA's), (91, 48938), (102, 48980), (132, 49091), (150, 49127),

Gene: Blexus\_80 Start: 49926, Stop: 50210, Start Num: 68  
Candidate Starts for Blexus\_80:  
(Start: 68 @49926 has 194 MA's), (Start: 74 @49950 has 7 MA's), (Start: 78 @49959 has 5 MA's), (110, 50058), (115, 50073), (148, 50187),

Gene: BluSpix\_59 Start: 36720, Stop: 36373, Start Num: 75  
Candidate Starts for BluSpix\_59:  
(15, 36921), (56, 36777), (59, 36774), (Start: 75 @36720 has 15 MA's), (Start: 82 @36708 has 1 MA's), (87, 36678), (92, 36660), (98, 36627), (106, 36585), (135, 36471), (156, 36396),

Gene: Bobby\_70 Start: 49641, Stop: 49345, Start Num: 74  
Candidate Starts for Bobby\_70:  
(Start: 55 @49689 has 1 MA's), (Start: 68 @49665 has 194 MA's), (Start: 74 @49641 has 7 MA's), (97, 49566), (132, 49437), (150, 49401),

Gene: Bobby\_68 Start: 49135, Stop: 48737, Start Num: 68  
Candidate Starts for Bobby\_68:  
(Start: 68 @49135 has 194 MA's), (79, 49099), (96, 49030), (108, 48973), (113, 48958), (115, 48949), (116, 48943), (132, 48856), (143, 48838), (146, 48826), (154, 48784), (156, 48760),

Gene: Bobi\_88 Start: 51408, Stop: 51779, Start Num: 68  
Candidate Starts for Bobi\_88:  
(Start: 68 @51408 has 194 MA's), (Start: 74 @51432 has 7 MA's), (Start: 78 @51441 has 5 MA's), (110, 51540), (115, 51555), (156, 51756),

Gene: BodEinwohner17\_91 Start: 52011, Stop: 52400, Start Num: 60

Candidate Starts for BodEinwohner17\_91:

(Start: 60 @52011 has 1 MA's), (Start: 74 @52053 has 7 MA's), (Start: 78 @52062 has 5 MA's), (110, 52161), (115, 52176), (156, 52377),

Gene: BronnyJames\_65 Start: 44145, Stop: 43759, Start Num: 68

Candidate Starts for BronnyJames\_65:

(30, 44238), (39, 44214), (Start: 68 @44145 has 194 MA's), (Start: 73 @44124 has 2 MA's), (79, 44109), (115, 43983), (123, 43923), (156, 43782),

Gene: BronnyJames\_67 Start: 44925, Stop: 44647, Start Num: 68

Candidate Starts for BronnyJames\_67:

(37, 44982), (Start: 68 @44925 has 194 MA's), (Start: 74 @44901 has 7 MA's), (Start: 78 @44892 has 5 MA's), (89, 44859), (93, 44847), (94, 44844), (110, 44796), (115, 44781), (132, 44703), (150, 44667),

Gene: Bruns\_60 Start: 39755, Stop: 39507, Start Num: 75

Candidate Starts for Bruns\_60:

(36, 39851), (46, 39827), (64, 39797), (Start: 75 @39755 has 15 MA's), (Start: 82 @39743 has 1 MA's), (125, 39530),

Gene: Brushbloom\_84 Start: 50508, Stop: 50876, Start Num: 68

Candidate Starts for Brushbloom\_84:

(Start: 68 @50508 has 194 MA's), (Start: 74 @50532 has 7 MA's), (Start: 78 @50541 has 5 MA's), (89, 50574), (93, 50586), (94, 50589), (110, 50637), (115, 50652), (156, 50853),

Gene: Bubbles123\_78 Start: 49394, Stop: 49753, Start Num: 68

Candidate Starts for Bubbles123\_78:

(30, 49301), (39, 49325), (Start: 68 @49394 has 194 MA's), (Start: 73 @49415 has 2 MA's), (Start: 78 @49427 has 5 MA's), (156, 49730),

Gene: Buck\_40 Start: 34705, Stop: 34334, Start Num: 68

Candidate Starts for Buck\_40:

(43, 34744), (Start: 60 @34726 has 1 MA's), (Start: 68 @34705 has 194 MA's), (Start: 74 @34681 has 7 MA's), (Start: 78 @34672 has 5 MA's), (115, 34558), (120, 34504), (141, 34441), (152, 34399), (156, 34357),

Gene: Budgie\_46 Start: 35211, Stop: 34930, Start Num: 68

Candidate Starts for Budgie\_46:

(Start: 68 @35211 has 194 MA's), (Start: 74 @35187 has 7 MA's), (Start: 78 @35178 has 5 MA's), (89, 35145), (93, 35133), (94, 35130), (115, 35067), (148, 34953),

Gene: BuzzLyseyear\_92 Start: 52666, Stop: 52950, Start Num: 68

Candidate Starts for BuzzLyseyear\_92:

(Start: 68 @52666 has 194 MA's), (Start: 74 @52690 has 7 MA's), (Start: 78 @52699 has 5 MA's), (110, 52798), (115, 52813), (148, 52927),

Gene: ByChance\_73 Start: 44779, Stop: 45045, Start Num: 65

Candidate Starts for ByChance\_73:

(Start: 65 @44779 has 5 MA's), (Start: 73 @44806 has 2 MA's), (79, 44821), (115, 44911), (131, 44989), (147, 45025),

Gene: Byougenkin\_82 Start: 47350, Stop: 47634, Start Num: 68

Candidate Starts for Byougenkin\_82:

(Start: 68 @47350 has 194 MA's), (Start: 74 @47374 has 7 MA's), (Start: 78 @47383 has 5 MA's), (110, 47482), (115, 47497), (148, 47611),

Gene: Cali\_17 Start: 6490, Stop: 6768, Start Num: 68

Candidate Starts for Cali\_17:

(49, 6451), (Start: 62 @6469 has 7 MA's), (Start: 68 @6490 has 194 MA's), (Start: 73 @6511 has 2 MA's), (Start: 78 @6523 has 5 MA's), (79, 6526), (85, 6541), (90, 6550), (132, 6712), (150, 6748),

Gene: Che9d\_94 Start: 49583, Stop: 49876, Start Num: 68

Candidate Starts for Che9d\_94:

(54, 49556), (Start: 68 @49583 has 194 MA's), (Start: 73 @49604 has 2 MA's), (79, 49619), (115, 49745), (140, 49853),

Gene: Cheesepuff\_91 Start: 49733, Stop: 50089, Start Num: 68

Candidate Starts for Cheesepuff\_91:

(Start: 68 @49733 has 194 MA's), (Start: 73 @49754 has 2 MA's), (79, 49769), (110, 49862), (132, 49970), (143, 49988), (146, 50000), (154, 50042), (156, 50066),

Gene: Chewbacca\_61 Start: 37859, Stop: 38119, Start Num: 78

Candidate Starts for Chewbacca\_61:

(2, 37556), (5, 37577), (13, 37631), (31, 37733), (70, 37829), (Start: 78 @37859 has 5 MA's), (89, 37892), (121, 38033), (127, 38045), (132, 38060), (147, 38084), (150, 38096), (152, 38102),

Gene: ChosenOne\_41 Start: 33974, Stop: 33603, Start Num: 68

Candidate Starts for ChosenOne\_41:

(43, 34013), (Start: 60 @33995 has 1 MA's), (Start: 68 @33974 has 194 MA's), (Start: 74 @33950 has 7 MA's), (Start: 78 @33941 has 5 MA's), (115, 33827), (120, 33773), (141, 33710), (152, 33668), (156, 33626),

Gene: Chubbello\_54 Start: 36576, Stop: 36815, Start Num: 71

Candidate Starts for Chubbello\_54:

(Start: 71 @36576 has 14 MA's), (124, 36777), (138, 36804),

Gene: Clarkson\_10 Start: 3252, Stop: 3536, Start Num: 68

Candidate Starts for Clarkson\_10:

(Start: 55 @3228 has 1 MA's), (Start: 68 @3252 has 194 MA's), (Start: 74 @3276 has 7 MA's), (97, 3351), (132, 3480), (150, 3516),

Gene: Corazon\_9 Start: 3205, Stop: 3489, Start Num: 68

Candidate Starts for Corazon\_9:

(Start: 55 @3181 has 1 MA's), (Start: 68 @3205 has 194 MA's), (Start: 74 @3229 has 7 MA's), (97, 3304), (132, 3433), (150, 3469),

Gene: Cornie\_82 Start: 48423, Stop: 48782, Start Num: 67

Candidate Starts for Cornie\_82:

(Start: 67 @48423 has 1 MA's), (Start: 74 @48447 has 7 MA's), (Start: 78 @48456 has 5 MA's), (110, 48555), (115, 48570), (132, 48663), (143, 48681), (146, 48693), (154, 48735), (156, 48759),

Gene: Cornucopia\_81 Start: 47550, Stop: 47819, Start Num: 68

Candidate Starts for Cornucopia\_81:

(Start: 68 @47550 has 194 MA's), (Start: 73 @47571 has 2 MA's), (111, 47670), (112, 47676), (150, 47796),

Gene: Cornucopia\_85 Start: 48642, Stop: 48905, Start Num: 68  
Candidate Starts for Cornucopia\_85:  
(Start: 68 @48642 has 194 MA's), (Start: 74 @48666 has 7 MA's), (Start: 78 @48675 has 5 MA's),  
(115, 48789), (128, 48864),

Gene: Courthouse\_70 Start: 46345, Stop: 45986, Start Num: 68  
Candidate Starts for Courthouse\_70:  
(Start: 68 @46345 has 194 MA's), (Start: 73 @46324 has 2 MA's), (Start: 78 @46312 has 5 MA's),  
(115, 46204), (139, 46105), (143, 46102), (159, 46009),

Gene: CrystalP\_44 Start: 36121, Stop: 35825, Start Num: 61  
Candidate Starts for CrystalP\_44:  
(Start: 61 @36121 has 15 MA's), (72, 36085), (Start: 78 @36067 has 5 MA's), (91, 36034), (102,  
35992), (150, 35845),

Gene: Cubone\_64 Start: 39109, Stop: 39372, Start Num: 69  
Candidate Starts for Cubone\_64:  
(1, 38800), (3, 38848), (4, 38860), (22, 38983), (56, 39079), (69, 39109), (Start: 74 @39130 has 7  
MA's), (147, 39349),

Gene: DaWorst\_83 Start: 48921, Stop: 49292, Start Num: 68  
Candidate Starts for DaWorst\_83:  
(Start: 68 @48921 has 194 MA's), (Start: 74 @48945 has 7 MA's), (Start: 78 @48954 has 5 MA's),  
(110, 49053), (115, 49068), (156, 49269),

Gene: Daikon\_44 Start: 35703, Stop: 35449, Start Num: 73  
Candidate Starts for Daikon\_44:  
(33, 35796), (42, 35772), (44, 35769), (Start: 68 @35724 has 194 MA's), (Start: 73 @35703 has 2  
MA's), (Start: 78 @35691 has 5 MA's), (115, 35583), (132, 35505), (150, 35469),

Gene: Dallas\_70 Start: 49134, Stop: 48841, Start Num: 68  
Candidate Starts for Dallas\_70:  
(Start: 68 @49134 has 194 MA's), (Start: 73 @49113 has 2 MA's), (Start: 78 @49101 has 5 MA's),  
(115, 48993), (120, 48945), (126, 48933), (133, 48906), (137, 48903), (150, 48864),

Gene: DeadP\_86 Start: 49174, Stop: 49458, Start Num: 68  
Candidate Starts for DeadP\_86:  
(Start: 68 @49174 has 194 MA's), (Start: 74 @49198 has 7 MA's), (Start: 78 @49207 has 5 MA's),  
(110, 49306), (115, 49321), (148, 49435),

Gene: Demsculpinboyz\_91 Start: 47365, Stop: 47763, Start Num: 68  
Candidate Starts for Demsculpinboyz\_91:  
(18, 47227), (Start: 68 @47365 has 194 MA's), (Start: 73 @47386 has 2 MA's), (79, 47401), (96,  
47470), (108, 47527), (113, 47542), (115, 47551), (116, 47557), (132, 47644), (143, 47662), (146,  
47674), (154, 47716), (156, 47740),

Gene: DillTech15\_88 Start: 49164, Stop: 49511, Start Num: 74  
Candidate Starts for DillTech15\_88:  
(46, 49107), (Start: 68 @49140 has 194 MA's), (Start: 74 @49164 has 7 MA's), (Start: 78 @49173 has  
5 MA's), (110, 49272), (115, 49287), (156, 49488),

Gene: DmpstrDiver\_71 Start: 49561, Stop: 49268, Start Num: 68  
Candidate Starts for DmpstrDiver\_71:

(Start: 68 @49561 has 194 MA's), (Start: 73 @49540 has 2 MA's), (Start: 78 @49528 has 5 MA's), (115, 49420), (120, 49372), (126, 49360), (133, 49333), (137, 49330), (150, 49291),

Gene: DoRead\_85 Start: 48009, Stop: 48383, Start Num: 68

Candidate Starts for DoRead\_85:

(Start: 68 @48009 has 194 MA's), (Start: 73 @48030 has 2 MA's), (79, 48045), (115, 48171), (136, 48264), (142, 48282), (145, 48294), (153, 48336), (156, 48360),

Gene: Donkeykong\_88 Start: 51342, Stop: 51620, Start Num: 68

Candidate Starts for Donkeykong\_88:

(Start: 68 @51342 has 194 MA's), (Start: 74 @51366 has 7 MA's), (Start: 78 @51375 has 5 MA's), (89, 51408), (93, 51420), (94, 51423), (110, 51471), (115, 51486), (132, 51564), (150, 51600),

Gene: Donkeykong\_90 Start: 52122, Stop: 52481, Start Num: 68

Candidate Starts for Donkeykong\_90:

(30, 52029), (39, 52053), (Start: 68 @52122 has 194 MA's), (Start: 73 @52143 has 2 MA's), (Start: 78 @52155 has 5 MA's), (119, 52311), (141, 52374), (152, 52416), (156, 52458),

Gene: Donovan\_54 Start: 36798, Stop: 37037, Start Num: 71

Candidate Starts for Donovan\_54:

(Start: 71 @36798 has 14 MA's), (124, 36999), (138, 37026),

Gene: Doomphist\_88 Start: 50710, Stop: 51087, Start Num: 62

Candidate Starts for Doomphist\_88:

(Start: 62 @50710 has 7 MA's), (Start: 74 @50752 has 7 MA's), (Start: 78 @50761 has 5 MA's), (115, 50875), (132, 50968), (143, 50986), (146, 50998), (154, 51040), (156, 51064),

Gene: Doomslug\_100 Start: 52230, Stop: 52574, Start Num: 74

Candidate Starts for Doomslug\_100:

(Start: 68 @52206 has 194 MA's), (Start: 74 @52230 has 7 MA's), (Start: 78 @52239 has 5 MA's), (89, 52272), (93, 52284), (94, 52287), (110, 52335), (115, 52350), (156, 52551),

Gene: Dorothy\_83 Start: 51040, Stop: 51411, Start Num: 68

Candidate Starts for Dorothy\_83:

(6, 50839), (8, 50851), (16, 50911), (20, 50923), (35, 50977), (Start: 68 @51040 has 194 MA's), (Start: 74 @51064 has 7 MA's), (Start: 78 @51073 has 5 MA's), (110, 51172), (115, 51187), (156, 51388),

Gene: Duke13\_80 Start: 51836, Stop: 51552, Start Num: 68

Candidate Starts for Duke13\_80:

(Start: 55 @51860 has 1 MA's), (Start: 68 @51836 has 194 MA's), (Start: 74 @51812 has 7 MA's), (97, 51737), (132, 51608), (150, 51572),

Gene: Eish\_88 Start: 51057, Stop: 51341, Start Num: 68

Candidate Starts for Eish\_88:

(Start: 68 @51057 has 194 MA's), (Start: 74 @51081 has 7 MA's), (Start: 78 @51090 has 5 MA's), (110, 51189), (115, 51204), (148, 51318),

Gene: Ejimix\_71 Start: 50999, Stop: 50706, Start Num: 68

Candidate Starts for Ejimix\_71:

(Start: 68 @50999 has 194 MA's), (Start: 73 @50978 has 2 MA's), (Start: 78 @50966 has 5 MA's), (115, 50858), (120, 50810), (126, 50798), (133, 50771), (137, 50768), (150, 50729),

Gene: EleanorGeorge\_80 Start: 48792, Stop: 49136, Start Num: 65

Candidate Starts for EleanorGeorge\_80:

(Start: 65 @48792 has 5 MA's), (Start: 73 @48819 has 2 MA's), (79, 48834), (115, 48924), (132, 49017), (143, 49035), (146, 49047), (154, 49089), (156, 49113),

Gene: Elite2014\_40 Start: 33973, Stop: 33602, Start Num: 68

Candidate Starts for Elite2014\_40:

(43, 34012), (Start: 60 @33994 has 1 MA's), (Start: 68 @33973 has 194 MA's), (Start: 74 @33949 has 7 MA's), (Start: 78 @33940 has 5 MA's), (115, 33826), (120, 33772), (141, 33709), (152, 33667), (156, 33625),

Gene: Emma\_88 Start: 49160, Stop: 49480, Start Num: 68

Candidate Starts for Emma\_88:

(47, 49127), (Start: 68 @49160 has 194 MA's), (Start: 74 @49184 has 7 MA's), (Start: 78 @49193 has 5 MA's), (110, 49292), (115, 49307), (123, 49367), (156, 49457),

Gene: Emmina\_44 Start: 34912, Stop: 34541, Start Num: 68

Candidate Starts for Emmina\_44:

(Start: 68 @34912 has 194 MA's), (Start: 74 @34885 has 7 MA's), (Start: 78 @34876 has 5 MA's), (89, 34843), (93, 34831), (94, 34828), (115, 34765), (120, 34711), (141, 34648), (152, 34606), (156, 34564),

Gene: Empress\_83 Start: 49521, Stop: 49898, Start Num: 62

Candidate Starts for Empress\_83:

(Start: 62 @49521 has 7 MA's), (Start: 74 @49563 has 7 MA's), (Start: 78 @49572 has 5 MA's), (115, 49686), (132, 49779), (143, 49797), (146, 49809), (154, 49851), (156, 49875),

Gene: EnzoK\_61 Start: 38364, Stop: 38077, Start Num: 75

Candidate Starts for EnzoK\_61:

(15, 38565), (56, 38421), (59, 38418), (Start: 75 @38364 has 15 MA's), (84, 38343), (86, 38331), (115, 38223), (156, 38100),

Gene: Eradicator\_76 Start: 47953, Stop: 48312, Start Num: 68

Candidate Starts for Eradicator\_76:

(Start: 68 @47953 has 194 MA's), (Start: 74 @47977 has 7 MA's), (Start: 78 @47986 has 5 MA's), (110, 48085), (115, 48100), (132, 48193), (143, 48211), (146, 48223), (154, 48265), (156, 48289),

Gene: Eradicator\_72 Start: 46896, Stop: 47174, Start Num: 68

Candidate Starts for Eradicator\_72:

(49, 46857), (Start: 62 @46875 has 7 MA's), (Start: 68 @46896 has 194 MA's), (Start: 73 @46917 has 2 MA's), (Start: 78 @46929 has 5 MA's), (79, 46932), (85, 46947), (90, 46956), (132, 47118), (150, 47154),

Gene: Etoile\_54 Start: 36580, Stop: 36819, Start Num: 71

Candidate Starts for Etoile\_54:

(Start: 71 @36580 has 14 MA's), (124, 36781), (138, 36808),

Gene: Eyeball\_63 Start: 41903, Stop: 41556, Start Num: 75

Candidate Starts for Eyeball\_63:

(15, 42104), (56, 41960), (59, 41957), (Start: 75 @41903 has 15 MA's), (Start: 82 @41891 has 1 MA's), (135, 41654), (156, 41579),

Gene: Fancypants\_89 Start: 51307, Stop: 51630, Start Num: 68

Candidate Starts for Fancypants\_89:

(18, 51169), (Start: 68 @51307 has 194 MA's), (Start: 73 @51328 has 2 MA's), (79, 51343), (96, 51412), (108, 51469), (113, 51484), (115, 51493), (116, 51499), (156, 51607),

Gene: FeliMaine\_10 Start: 3253, Stop: 3537, Start Num: 68

Candidate Starts for FeliMaine\_10:

(Start: 55 @3229 has 1 MA's), (Start: 68 @3253 has 194 MA's), (Start: 74 @3277 has 7 MA's), (97, 3352), (132, 3481), (150, 3517),

Gene: Firehouse51\_79 Start: 50692, Stop: 51051, Start Num: 68

Candidate Starts for Firehouse51\_79:

(8, 50491), (12, 50503), (20, 50563), (23, 50575), (40, 50629), (Start: 68 @50692 has 194 MA's), (Start: 74 @50716 has 7 MA's), (Start: 78 @50725 has 5 MA's), (89, 50758), (115, 50839), (132, 50932), (143, 50950), (146, 50962), (154, 51004), (156, 51028),

Gene: FirstPlacePfu\_60 Start: 37764, Stop: 38024, Start Num: 78

Candidate Starts for FirstPlacePfu\_60:

(37, 37662), (41, 37671), (Start: 78 @37764 has 5 MA's), (89, 37797), (121, 37938), (127, 37950), (132, 37965), (147, 37989), (150, 38001), (152, 38007),

Gene: FirstPlacePfu\_56 Start: 36612, Stop: 36851, Start Num: 71

Candidate Starts for FirstPlacePfu\_56:

(Start: 71 @36612 has 14 MA's), (124, 36813), (138, 36840),

Gene: Fishburne\_54 Start: 36580, Stop: 36819, Start Num: 71

Candidate Starts for Fishburne\_54:

(Start: 71 @36580 has 14 MA's), (124, 36781), (138, 36808),

Gene: Flathead\_85 Start: 49803, Stop: 50174, Start Num: 68

Candidate Starts for Flathead\_85:

(Start: 68 @49803 has 194 MA's), (Start: 74 @49827 has 7 MA's), (Start: 78 @49836 has 5 MA's), (110, 49935), (115, 49950), (156, 50151),

Gene: Florinda\_94 Start: 51591, Stop: 51875, Start Num: 68

Candidate Starts for Florinda\_94:

(Start: 68 @51591 has 194 MA's), (Start: 74 @51615 has 7 MA's), (Start: 78 @51624 has 5 MA's), (110, 51723), (115, 51738), (148, 51852),

Gene: Flypotenuse\_38 Start: 34455, Stop: 34180, Start Num: 68

Candidate Starts for Flypotenuse\_38:

(33, 34527), (42, 34503), (44, 34500), (Start: 68 @34455 has 194 MA's), (Start: 73 @34434 has 2 MA's), (Start: 78 @34422 has 5 MA's), (115, 34314), (132, 34236), (150, 34200),

Gene: Forsytheast\_60 Start: 39923, Stop: 39675, Start Num: 75

Candidate Starts for Forsytheast\_60:

(36, 40019), (46, 39995), (64, 39965), (Start: 75 @39923 has 15 MA's), (Start: 82 @39911 has 1 MA's), (125, 39698),

Gene: Gachnar\_61 Start: 41094, Stop: 40789, Start Num: 75

Candidate Starts for Gachnar\_61:

(15, 41295), (56, 41151), (59, 41148), (Start: 75 @41094 has 15 MA's), (Start: 82 @41082 has 1 MA's), (87, 41052), (92, 41034), (98, 41001), (106, 40959), (156, 40812),

Gene: Galactic\_82 Start: 48872, Stop: 49156, Start Num: 68

Candidate Starts for Galactic\_82:

(Start: 68 @48872 has 194 MA's), (Start: 74 @48899 has 7 MA's), (Start: 78 @48908 has 5 MA's), (89, 48941), (93, 48953), (94, 48956), (110, 49004), (115, 49019), (148, 49133),

Gene: GaloreK\_58 Start: 38104, Stop: 38343, Start Num: 71

Candidate Starts for GaloreK\_58:

(Start: 71 @38104 has 14 MA's), (124, 38305), (138, 38332),

Gene: Gandalph\_83 Start: 47074, Stop: 47445, Start Num: 68

Candidate Starts for Gandalph\_83:

(Start: 68 @47074 has 194 MA's), (Start: 74 @47098 has 7 MA's), (Start: 78 @47107 has 5 MA's), (115, 47221), (123, 47281), (156, 47422),

Gene: Gator\_41 Start: 35594, Stop: 35319, Start Num: 68

Candidate Starts for Gator\_41:

(33, 35666), (42, 35642), (44, 35639), (Start: 68 @35594 has 194 MA's), (Start: 73 @35573 has 2 MA's), (Start: 78 @35561 has 5 MA's), (115, 35453), (132, 35375), (150, 35339),

Gene: Girafales\_91 Start: 51196, Stop: 51480, Start Num: 68

Candidate Starts for Girafales\_91:

(Start: 68 @51196 has 194 MA's), (Start: 74 @51220 has 7 MA's), (Start: 78 @51229 has 5 MA's), (110, 51328), (115, 51343), (148, 51457),

Gene: Glexan\_41 Start: 35582, Stop: 35307, Start Num: 68

Candidate Starts for Glexan\_41:

(33, 35654), (42, 35630), (44, 35627), (Start: 68 @35582 has 194 MA's), (Start: 73 @35561 has 2 MA's), (Start: 78 @35549 has 5 MA's), (115, 35441), (132, 35363), (150, 35327),

Gene: Gonephishing\_71 Start: 47256, Stop: 46885, Start Num: 68

Candidate Starts for Gonephishing\_71:

(43, 47295), (Start: 60 @47277 has 1 MA's), (Start: 68 @47256 has 194 MA's), (Start: 74 @47232 has 7 MA's), (Start: 78 @47223 has 5 MA's), (110, 47124), (115, 47109), (156, 46908),

Gene: Grimmer\_95 Start: 50263, Stop: 50601, Start Num: 68

Candidate Starts for Grimmer\_95:

(26, 50158), (34, 50188), (Start: 68 @50263 has 194 MA's), (Start: 73 @50284 has 2 MA's), (79, 50299), (115, 50389), (132, 50482), (143, 50500), (146, 50512), (154, 50554), (156, 50578),

Gene: Guppsters\_76 Start: 46731, Stop: 47015, Start Num: 68

Candidate Starts for Guppsters\_76:

(Start: 55 @46707 has 1 MA's), (Start: 68 @46731 has 194 MA's), (Start: 74 @46755 has 7 MA's), (97, 46830), (132, 46959), (150, 46995),

Gene: Guppsters\_78 Start: 47339, Stop: 47707, Start Num: 68

Candidate Starts for Guppsters\_78:

(Start: 68 @47339 has 194 MA's), (Start: 74 @47363 has 7 MA's), (Start: 78 @47372 has 5 MA's), (89, 47405), (93, 47417), (94, 47420), (110, 47468), (115, 47483), (156, 47684),

Gene: Gwendoluna\_64 Start: 42781, Stop: 42374, Start Num: 68

Candidate Starts for Gwendoluna\_64:

(Start: 68 @42781 has 194 MA's), (Start: 78 @42748 has 5 MA's), (79, 42745), (86, 42718), (89, 42712), (115, 42592), (134, 42493), (135, 42490), (156, 42397),

Gene: Hades\_81 Start: 47173, Stop: 47484, Start Num: 48

Candidate Starts for Hades\_81:

(38, 47146), (Start: 48 @47173 has 5 MA's), (Start: 73 @47236 has 2 MA's), (112, 47341), (150, 47461),

Gene: Halley\_73 Start: 50213, Stop: 49920, Start Num: 68

Candidate Starts for Halley\_73:

(Start: 68 @50213 has 194 MA's), (Start: 73 @50192 has 2 MA's), (Start: 78 @50180 has 5 MA's), (115, 50072), (120, 50024), (126, 50012), (133, 49985), (137, 49982), (150, 49943),

Gene: Hannaconda\_68 Start: 45250, Stop: 44864, Start Num: 68

Candidate Starts for Hannaconda\_68:

(30, 45343), (39, 45319), (Start: 68 @45250 has 194 MA's), (Start: 73 @45229 has 2 MA's), (79, 45214), (115, 45088), (123, 45028), (156, 44887),

Gene: Harella\_43 Start: 36098, Stop: 35823, Start Num: 68

Candidate Starts for Harella\_43:

(33, 36170), (42, 36146), (44, 36143), (Start: 68 @36098 has 194 MA's), (Start: 73 @36077 has 2 MA's), (Start: 78 @36065 has 5 MA's), (115, 35957), (132, 35879), (150, 35843),

Gene: Harley\_85 Start: 49675, Stop: 50043, Start Num: 68

Candidate Starts for Harley\_85:

(43, 49636), (Start: 60 @49654 has 1 MA's), (Start: 68 @49675 has 194 MA's), (Start: 74 @49699 has 7 MA's), (Start: 78 @49708 has 5 MA's), (89, 49741), (93, 49753), (94, 49756), (110, 49804), (115, 49819), (156, 50020),

Gene: Hegedechwinu\_83 Start: 48330, Stop: 48701, Start Num: 68

Candidate Starts for Hegedechwinu\_83:

(45, 48294), (Start: 68 @48330 has 194 MA's), (Start: 74 @48354 has 7 MA's), (Start: 78 @48363 has 5 MA's), (89, 48396), (115, 48477), (156, 48678),

Gene: Hidrated\_66 Start: 49459, Stop: 49061, Start Num: 68

Candidate Starts for Hidrated\_66:

(Start: 68 @49459 has 194 MA's), (79, 49423), (96, 49354), (108, 49297), (113, 49282), (115, 49273), (116, 49267), (132, 49180), (143, 49162), (146, 49150), (154, 49108), (156, 49084),

Gene: Hlubikazi\_81 Start: 47588, Stop: 47899, Start Num: 48

Candidate Starts for Hlubikazi\_81:

(38, 47561), (Start: 48 @47588 has 5 MA's), (Start: 73 @47651 has 2 MA's), (112, 47756), (150, 47876),

Gene: Hlubikazi\_80 Start: 47314, Stop: 47595, Start Num: 68

Candidate Starts for Hlubikazi\_80:

(Start: 68 @47314 has 194 MA's), (Start: 74 @47338 has 7 MA's), (Start: 78 @47347 has 5 MA's), (115, 47461), (130, 47533), (132, 47539),

Gene: HokkenD\_64 Start: 48482, Stop: 48189, Start Num: 68

Candidate Starts for HokkenD\_64:

(Start: 68 @48482 has 194 MA's), (Start: 73 @48461 has 2 MA's), (Start: 78 @48449 has 5 MA's), (115, 48341), (120, 48293), (126, 48281), (133, 48254), (137, 48251), (150, 48212),

Gene: Hughesyang\_70 Start: 50142, Stop: 49849, Start Num: 68

Candidate Starts for Hughesyang\_70:

(Start: 68 @50142 has 194 MA's), (Start: 73 @50121 has 2 MA's), (Start: 78 @50109 has 5 MA's), (115, 50001), (120, 49953), (126, 49941), (133, 49914), (137, 49911), (150, 49872),

Gene: Huphlepuuff\_10 Start: 2982, Stop: 3266, Start Num: 68

Candidate Starts for Huphlepuuff\_10:

(Start: 55 @2958 has 1 MA's), (Start: 68 @2982 has 194 MA's), (Start: 74 @3006 has 7 MA's), (97, 3081), (132, 3210), (150, 3246),

Gene: IHOP\_42 Start: 35685, Stop: 35389, Start Num: 61

Candidate Starts for IHOP\_42:

(Start: 61 @35685 has 15 MA's), (72, 35649), (Start: 78 @35631 has 5 MA's), (91, 35598), (102, 35556), (150, 35409),

Gene: IMpilo\_79 Start: 47727, Stop: 47987, Start Num: 74

Candidate Starts for IMpilo\_79:

(29, 47616), (Start: 68 @47703 has 194 MA's), (Start: 74 @47727 has 7 MA's), (Start: 78 @47736 has 5 MA's), (110, 47835), (115, 47850), (148, 47964),

Gene: lbhubesi\_80 Start: 47022, Stop: 47336, Start Num: 51

Candidate Starts for lbhubesi\_80:

(Start: 51 @47022 has 1 MA's), (Start: 55 @47028 has 1 MA's), (Start: 68 @47052 has 194 MA's), (Start: 74 @47076 has 7 MA's), (130, 47274), (132, 47280), (150, 47316),

Gene: IgnatiusPatJac\_61 Start: 40665, Stop: 40318, Start Num: 75

Candidate Starts for IgnatiusPatJac\_61:

(15, 40866), (56, 40722), (59, 40719), (Start: 75 @40665 has 15 MA's), (Start: 82 @40653 has 1 MA's), (87, 40623), (92, 40605), (98, 40572), (106, 40530), (135, 40416), (156, 40341),

Gene: Inca\_41 Start: 34210, Stop: 33914, Start Num: 61

Candidate Starts for Inca\_41:

(Start: 61 @34210 has 15 MA's), (72, 34174), (Start: 78 @34156 has 5 MA's), (91, 34123), (102, 34081), (150, 33934),

Gene: Inventum\_80 Start: 49225, Stop: 49596, Start Num: 68

Candidate Starts for Inventum\_80:

(6, 49024), (8, 49036), (16, 49096), (20, 49108), (35, 49162), (Start: 68 @49225 has 194 MA's), (Start: 74 @49249 has 7 MA's), (Start: 78 @49258 has 5 MA's), (110, 49357), (115, 49372), (156, 49573),

Gene: IrishSherpFalk\_83 Start: 50030, Stop: 50401, Start Num: 68

Candidate Starts for IrishSherpFalk\_83:

(Start: 68 @50030 has 194 MA's), (Start: 74 @50054 has 7 MA's), (Start: 78 @50063 has 5 MA's), (110, 50162), (115, 50177), (156, 50378),

Gene: JC27\_64 Start: 41329, Stop: 41042, Start Num: 68

Candidate Starts for JC27\_64:

(Start: 51 @41359 has 1 MA's), (Start: 68 @41329 has 194 MA's), (Start: 74 @41305 has 7 MA's), (147, 41065),

Gene: JalFarm20\_90 Start: 50347, Stop: 50718, Start Num: 68

Candidate Starts for JalFarm20\_90:

(45, 50311), (Start: 68 @50347 has 194 MA's), (Start: 74 @50371 has 7 MA's), (Start: 78 @50380 has 5 MA's), (89, 50413), (115, 50494), (156, 50695),

Gene: James\_86 Start: 51529, Stop: 51900, Start Num: 68

Candidate Starts for James\_86:

(Start: 68 @51529 has 194 MA's), (Start: 74 @51553 has 7 MA's), (Start: 78 @51562 has 5 MA's), (110, 51661), (115, 51676), (156, 51877),

Gene: Jarcob\_85 Start: 51167, Stop: 51499, Start Num: 81

Candidate Starts for Jarcob\_85:

(Start: 81 @51167 has 1 MA's), (110, 51260), (115, 51275), (156, 51476),

Gene: Jennelsea\_78 Start: 48296, Stop: 48613, Start Num: 73

Candidate Starts for Jennelsea\_78:

(Start: 65 @48269 has 5 MA's), (Start: 73 @48296 has 2 MA's), (79, 48311), (115, 48401), (132, 48494), (143, 48512), (146, 48524), (154, 48566), (156, 48590),

Gene: Jinglebell\_88 Start: 49768, Stop: 50088, Start Num: 68

Candidate Starts for Jinglebell\_88:

(Start: 55 @49744 has 1 MA's), (Start: 68 @49768 has 194 MA's), (Start: 74 @49792 has 7 MA's), (97, 49867), (132, 49996), (150, 50032),

Gene: Jinglebell\_90 Start: 50298, Stop: 50591, Start Num: 68

Candidate Starts for Jinglebell\_90:

(Start: 68 @50298 has 194 MA's), (Start: 73 @50319 has 2 MA's), (79, 50334), (115, 50460), (140, 50568),

Gene: Job42\_84 Start: 52418, Stop: 52702, Start Num: 68

Candidate Starts for Job42\_84:

(Start: 68 @52418 has 194 MA's), (Start: 74 @52442 has 7 MA's), (Start: 78 @52451 has 5 MA's), (110, 52550), (115, 52565), (148, 52679),

Gene: JoeyJr\_86 Start: 51134, Stop: 51505, Start Num: 68

Candidate Starts for JoeyJr\_86:

(Start: 68 @51134 has 194 MA's), (Start: 74 @51158 has 7 MA's), (Start: 78 @51167 has 5 MA's), (110, 51266), (115, 51281), (156, 51482),

Gene: JoieB\_10 Start: 3201, Stop: 3485, Start Num: 68

Candidate Starts for JoieB\_10:

(Start: 55 @3177 has 1 MA's), (Start: 68 @3201 has 194 MA's), (Start: 74 @3225 has 7 MA's), (97, 3300), (132, 3429), (150, 3465),

Gene: Jorgensen\_63 Start: 40720, Stop: 40448, Start Num: 68

Candidate Starts for Jorgensen\_63:

(Start: 68 @40720 has 194 MA's), (Start: 73 @40699 has 2 MA's), (Start: 78 @40687 has 5 MA's), (115, 40579), (150, 40471),

Gene: Juice456\_78 Start: 48213, Stop: 48485, Start Num: 68

Candidate Starts for Juice456\_78:

(Start: 68 @48213 has 194 MA's), (Start: 73 @48234 has 2 MA's), (Start: 78 @48246 has 5 MA's), (115, 48354), (150, 48462),

Gene: JuicyJay\_70 Start: 51347, Stop: 51054, Start Num: 68

Candidate Starts for JuicyJay\_70:

(Start: 68 @51347 has 194 MA's), (Start: 73 @51326 has 2 MA's), (Start: 78 @51314 has 5 MA's), (115, 51206), (120, 51158), (126, 51146), (133, 51119), (137, 51116), (150, 51077),

Gene: Juniper1\_80 Start: 48708, Stop: 48983, Start Num: 68

Candidate Starts for Juniper1\_80:

(26, 48603), (34, 48633), (Start: 68 @48708 has 194 MA's), (Start: 73 @48729 has 2 MA's), (79, 48744), (115, 48834), (132, 48927), (143, 48945),

Gene: Kalah2\_66 Start: 49506, Stop: 49213, Start Num: 68

Candidate Starts for Kalah2\_66:

(Start: 68 @49506 has 194 MA's), (Start: 73 @49485 has 2 MA's), (Start: 78 @49473 has 5 MA's), (115, 49365), (120, 49317), (126, 49305), (133, 49278), (137, 49275), (150, 49236),

Gene: Karhdo\_80 Start: 47607, Stop: 47906, Start Num: 68

Candidate Starts for Karhdo\_80:

(Start: 68 @47607 has 194 MA's), (Start: 73 @47628 has 2 MA's), (79, 47643), (115, 47769), (140, 47883),

Gene: Kari\_54 Start: 36577, Stop: 36816, Start Num: 71

Candidate Starts for Kari\_54:

(Start: 71 @36577 has 14 MA's), (124, 36778), (138, 36805),

Gene: KashFlow\_66 Start: 45121, Stop: 44753, Start Num: 68

Candidate Starts for KashFlow\_66:

(28, 45214), (32, 45190), (Start: 68 @45121 has 194 MA's), (Start: 74 @45097 has 7 MA's), (Start: 78 @45088 has 5 MA's), (89, 45055), (93, 45043), (94, 45040), (115, 44977), (123, 44917), (156, 44776),

Gene: KashFlow\_68 Start: 45901, Stop: 45623, Start Num: 68

Candidate Starts for KashFlow\_68:

(49, 45940), (Start: 62 @45922 has 7 MA's), (Start: 68 @45901 has 194 MA's), (Start: 73 @45880 has 2 MA's), (Start: 78 @45868 has 5 MA's), (79, 45865), (85, 45850), (90, 45841), (132, 45679), (150, 45643),

Gene: Kenuha5\_79 Start: 50155, Stop: 50526, Start Num: 68

Candidate Starts for Kenuha5\_79:

(28, 50062), (32, 50086), (Start: 68 @50155 has 194 MA's), (Start: 74 @50179 has 7 MA's), (Start: 78 @50188 has 5 MA's), (115, 50302), (156, 50503),

Gene: Kersh\_83 Start: 50793, Stop: 51092, Start Num: 68

Candidate Starts for Kersh\_83:

(Start: 68 @50793 has 194 MA's), (Start: 73 @50814 has 2 MA's), (79, 50829), (115, 50955), (140, 51069),

Gene: KingMidas\_84 Start: 49936, Stop: 50313, Start Num: 62

Candidate Starts for KingMidas\_84:

(Start: 62 @49936 has 7 MA's), (Start: 74 @49978 has 7 MA's), (Start: 78 @49987 has 5 MA's), (110, 50086), (115, 50101), (132, 50194), (143, 50212), (146, 50224), (154, 50266), (156, 50290),

Gene: Klein\_71 Start: 49529, Stop: 49236, Start Num: 68

Candidate Starts for Klein\_71:

(Start: 68 @49529 has 194 MA's), (Start: 73 @49508 has 2 MA's), (Start: 78 @49496 has 5 MA's), (115, 49388), (120, 49340), (126, 49328), (133, 49301), (137, 49298), (150, 49259),

Gene: Koella\_76 Start: 46177, Stop: 46458, Start Num: 68

Candidate Starts for Koella\_76:

(Start: 68 @46177 has 194 MA's), (Start: 74 @46198 has 7 MA's), (88, 46231), (132, 46402), (150, 46438),

Gene: Krakatau\_77 Start: 45727, Stop: 46011, Start Num: 68

Candidate Starts for Krakatau\_77:

(Start: 68 @45727 has 194 MA's), (Start: 74 @45751 has 7 MA's), (Start: 78 @45760 has 5 MA's), (110, 45859), (115, 45874), (148, 45988),

Gene: KristaRAM\_82 Start: 48874, Stop: 49245, Start Num: 68

Candidate Starts for KristaRAM\_82:

(6, 48673), (8, 48685), (16, 48745), (20, 48757), (35, 48811), (Start: 68 @48874 has 194 MA's), (Start: 74 @48898 has 7 MA's), (Start: 78 @48907 has 5 MA's), (110, 49006), (115, 49021), (123, 49081), (156, 49222),

Gene: Kykar\_62 Start: 41465, Stop: 41115, Start Num: 75

Candidate Starts for Kykar\_62:

(15, 41666), (56, 41522), (59, 41519), (Start: 75 @41465 has 15 MA's), (84, 41444), (115, 41333), (118, 41282), (134, 41234), (135, 41231), (156, 41138),

Gene: Lamina13\_65 Start: 42283, Stop: 41903, Start Num: 75

Candidate Starts for Lamina13\_65:

(15, 42484), (56, 42340), (59, 42337), (Start: 75 @42283 has 15 MA's), (84, 42262), (87, 42247), (115, 42121), (118, 42070), (134, 42022), (135, 42019), (156, 41926),

Gene: Langerak\_55 Start: 36596, Stop: 36835, Start Num: 71

Candidate Starts for Langerak\_55:

(Start: 71 @36596 has 14 MA's), (124, 36797), (138, 36824),

Gene: Leozinho\_79 Start: 46485, Stop: 46781, Start Num: 61

Candidate Starts for Leozinho\_79:

(Start: 61 @46485 has 15 MA's), (72, 46521), (Start: 78 @46539 has 5 MA's), (91, 46572), (102, 46614), (132, 46725), (150, 46761),

Gene: Leperchaun\_84 Start: 50368, Stop: 50739, Start Num: 68

Candidate Starts for Leperchaun\_84:

(Start: 68 @50368 has 194 MA's), (Start: 74 @50392 has 7 MA's), (Start: 78 @50401 has 5 MA's), (110, 50500), (115, 50515), (156, 50716),

Gene: LilSpotty\_77 Start: 45059, Stop: 45403, Start Num: 83

Candidate Starts for LilSpotty\_77:

(77, 45041), (80, 45047), (Start: 83 @45059 has 1 MA's), (86, 45071), (87, 45074), (95, 45101), (99, 45116), (103, 45131), (104, 45134), (117, 45209), (141, 45284), (149, 45311), (158, 45380), (160, 45386),

Gene: LilSpotty\_76 Start: 44396, Stop: 44653, Start Num: 78

Candidate Starts for LilSpotty\_76:

(19, 44225), (31, 44270), (70, 44366), (Start: 78 @44396 has 5 MA's), (89, 44429), (121, 44570), (122, 44573), (124, 44576), (130, 44600), (132, 44606), (147, 44630),

Gene: Lilbit\_10 Start: 3253, Stop: 3537, Start Num: 68

Candidate Starts for Lilbit\_10:

(Start: 55 @3229 has 1 MA's), (Start: 68 @3253 has 194 MA's), (Start: 74 @3277 has 7 MA's), (97, 3352), (132, 3481), (150, 3517),

Gene: Lilpickle\_40 Start: 33973, Stop: 33602, Start Num: 68

Candidate Starts for Lilpickle\_40:

(43, 34012), (Start: 60 @33994 has 1 MA's), (Start: 68 @33973 has 194 MA's), (Start: 74 @33949 has 7 MA's), (Start: 78 @33940 has 5 MA's), (115, 33826), (120, 33772), (141, 33709), (152, 33667), (156, 33625),

Gene: LittleE\_74 Start: 49484, Stop: 49203, Start Num: 68

Candidate Starts for LittleE\_74:

(7, 49685), (9, 49673), (17, 49613), (21, 49601), (35, 49547), (Start: 68 @49484 has 194 MA's), (Start: 74 @49460 has 7 MA's), (Start: 78 @49451 has 5 MA's), (89, 49418), (93, 49406), (94, 49403), (110, 49355), (115, 49340), (148, 49226),

Gene: LittleLaf\_9 Start: 2982, Stop: 3266, Start Num: 68

Candidate Starts for LittleLaf\_9:

(Start: 55 @2958 has 1 MA's), (Start: 68 @2982 has 194 MA's), (Start: 74 @3006 has 7 MA's), (97, 3081), (132, 3210), (150, 3246),

Gene: Llama\_88 Start: 49624, Stop: 49944, Start Num: 68

Candidate Starts for Llama\_88:

(Start: 55 @49600 has 1 MA's), (Start: 68 @49624 has 194 MA's), (Start: 74 @49648 has 7 MA's), (97, 49723), (132, 49852), (150, 49888),

Gene: Llama\_90 Start: 50154, Stop: 50447, Start Num: 68

Candidate Starts for Llama\_90:

(Start: 68 @50154 has 194 MA's), (Start: 73 @50175 has 2 MA's), (79, 50190), (115, 50316), (140, 50424),

Gene: Llij\_80 Start: 47508, Stop: 47834, Start Num: 68

Candidate Starts for Llij\_80:

(Start: 68 @47508 has 194 MA's), (Start: 78 @47541 has 5 MA's), (79, 47544), (86, 47571), (89, 47577), (115, 47697), (144, 47811),

Gene: Lucky2013\_69 Start: 45952, Stop: 45659, Start Num: 68

Candidate Starts for Lucky2013\_69:

(Start: 68 @45952 has 194 MA's), (Start: 73 @45931 has 2 MA's), (Start: 78 @45919 has 5 MA's), (115, 45811), (120, 45763), (126, 45751), (133, 45724), (137, 45721), (150, 45682),

Gene: Lucky2013\_73 Start: 47341, Stop: 47081, Start Num: 74

Candidate Starts for Lucky2013\_73:

(Start: 68 @47365 has 194 MA's), (Start: 74 @47341 has 7 MA's), (97, 47266), (132, 47137), (150, 47101),

Gene: LunaStella\_80 Start: 48469, Stop: 48825, Start Num: 68

Candidate Starts for LunaStella\_80:

(44, 48427), (52, 48445), (Start: 68 @48469 has 194 MA's), (Start: 73 @48490 has 2 MA's), (Start: 78 @48502 has 5 MA's), (132, 48706), (143, 48724), (146, 48736), (154, 48778), (156, 48802),

Gene: MadMen\_89 Start: 50218, Stop: 50580, Start Num: 68

Candidate Starts for MadMen\_89:

(Start: 68 @50218 has 194 MA's), (Start: 73 @50239 has 2 MA's), (110, 50347), (118, 50413), (134, 50461), (135, 50464), (156, 50557),

Gene: MadMen\_79 Start: 47451, Stop: 47750, Start Num: 68  
Candidate Starts for MadMen\_79:  
(Start: 68 @47451 has 194 MA's), (Start: 73 @47472 has 2 MA's), (79, 47487), (115, 47613), (140, 47727),

Gene: Mahavrat\_81 Start: 47831, Stop: 48169, Start Num: 68  
Candidate Starts for Mahavrat\_81:  
(26, 47726), (34, 47756), (Start: 68 @47831 has 194 MA's), (Start: 73 @47852 has 2 MA's), (79, 47867), (115, 47957), (132, 48050), (143, 48068), (146, 48080), (154, 48122), (156, 48146),

Gene: Majeke\_60 Start: 38155, Stop: 38394, Start Num: 71  
Candidate Starts for Majeke\_60:  
(Start: 71 @38155 has 14 MA's), (124, 38356), (138, 38383),

Gene: Mandlovu\_80 Start: 47256, Stop: 47537, Start Num: 68  
Candidate Starts for Mandlovu\_80:  
(Start: 68 @47256 has 194 MA's), (Start: 74 @47280 has 7 MA's), (Start: 78 @47289 has 5 MA's), (115, 47403), (130, 47475), (132, 47481),

Gene: Mandlovu\_81 Start: 47530, Stop: 47841, Start Num: 48  
Candidate Starts for Mandlovu\_81:  
(38, 47503), (Start: 48 @47530 has 5 MA's), (Start: 73 @47593 has 2 MA's), (112, 47698), (150, 47818),

Gene: Mangethe\_60 Start: 38155, Stop: 38394, Start Num: 71  
Candidate Starts for Mangethe\_60:  
(Start: 71 @38155 has 14 MA's), (124, 38356), (138, 38383),

Gene: Marker\_79 Start: 47302, Stop: 47679, Start Num: 73  
Candidate Starts for Marker\_79:  
(66, 47275), (Start: 73 @47302 has 2 MA's), (79, 47317), (96, 47386), (107, 47440), (108, 47443), (113, 47458), (115, 47467), (116, 47473), (132, 47560), (143, 47578), (146, 47590), (154, 47632), (156, 47656),

Gene: Marker\_89 Start: 50064, Stop: 50420, Start Num: 73  
Candidate Starts for Marker\_89:  
(Start: 73 @50064 has 2 MA's), (79, 50079), (86, 50103), (93, 50130), (101, 50160), (129, 50280), (152, 50355), (156, 50397),

Gene: Marleymoo\_65 Start: 48325, Stop: 48032, Start Num: 68  
Candidate Starts for Marleymoo\_65:  
(Start: 68 @48325 has 194 MA's), (Start: 73 @48304 has 2 MA's), (Start: 78 @48292 has 5 MA's), (115, 48184), (120, 48136), (126, 48124), (133, 48097), (137, 48094), (150, 48055),

Gene: Marshmallow\_43 Start: 36119, Stop: 35823, Start Num: 61  
Candidate Starts for Marshmallow\_43:  
(Start: 61 @36119 has 15 MA's), (72, 36083), (Start: 78 @36065 has 5 MA's), (91, 36032), (102, 35990), (150, 35843),

Gene: Marvin\_8 Start: 2964, Stop: 3248, Start Num: 68  
Candidate Starts for Marvin\_8:  
(Start: 55 @2940 has 1 MA's), (Start: 68 @2964 has 194 MA's), (Start: 74 @2988 has 7 MA's), (97, 3063), (132, 3192), (150, 3228),

Gene: Mattes\_82 Start: 50261, Stop: 50632, Start Num: 68

Candidate Starts for Mattes\_82:

(29, 50174), (Start: 68 @50261 has 194 MA's), (Start: 74 @50285 has 7 MA's), (Start: 78 @50294 has 5 MA's), (110, 50393), (115, 50408), (156, 50609),

Gene: Medindi\_89 Start: 51260, Stop: 51544, Start Num: 68

Candidate Starts for Medindi\_89:

(Start: 68 @51260 has 194 MA's), (Start: 74 @51284 has 7 MA's), (Start: 78 @51293 has 5 MA's), (110, 51392), (115, 51407), (148, 51521),

Gene: MiaZeal\_72 Start: 46608, Stop: 46255, Start Num: 68

Candidate Starts for MiaZeal\_72:

(Start: 68 @46608 has 194 MA's), (Start: 73 @46587 has 2 MA's), (Start: 78 @46575 has 5 MA's), (115, 46467), (132, 46374), (143, 46356), (146, 46344), (154, 46302), (156, 46278),

Gene: MilleniumForce\_84 Start: 50365, Stop: 50733, Start Num: 68

Candidate Starts for MilleniumForce\_84:

(Start: 68 @50365 has 194 MA's), (Start: 74 @50389 has 7 MA's), (Start: 78 @50398 has 5 MA's), (89, 50431), (93, 50443), (94, 50446), (115, 50509), (156, 50710),

Gene: Minerva\_79 Start: 52268, Stop: 51984, Start Num: 68

Candidate Starts for Minerva\_79:

(Start: 55 @52292 has 1 MA's), (Start: 68 @52268 has 194 MA's), (Start: 74 @52244 has 7 MA's), (97, 52169), (132, 52040), (150, 52004),

Gene: Minerva\_77 Start: 51629, Stop: 51336, Start Num: 68

Candidate Starts for Minerva\_77:

(Start: 68 @51629 has 194 MA's), (Start: 73 @51608 has 2 MA's), (Start: 78 @51596 has 5 MA's), (115, 51488), (120, 51440), (126, 51428), (133, 51401), (137, 51398), (150, 51359),

Gene: Modragons\_86 Start: 49612, Stop: 49932, Start Num: 68

Candidate Starts for Modragons\_86:

(Start: 55 @49588 has 1 MA's), (Start: 68 @49612 has 194 MA's), (Start: 74 @49636 has 7 MA's), (97, 49711), (132, 49840), (150, 49876),

Gene: Modragons\_88 Start: 50142, Stop: 50435, Start Num: 68

Candidate Starts for Modragons\_88:

(Start: 68 @50142 has 194 MA's), (Start: 73 @50163 has 2 MA's), (79, 50178), (115, 50304), (140, 50412),

Gene: MooMoo\_80 Start: 48107, Stop: 48433, Start Num: 68

Candidate Starts for MooMoo\_80:

(Start: 68 @48107 has 194 MA's), (Start: 78 @48140 has 5 MA's), (79, 48143), (86, 48170), (89, 48176), (115, 48296), (144, 48410),

Gene: Moonbeam\_83 Start: 49609, Stop: 49980, Start Num: 68

Candidate Starts for Moonbeam\_83:

(Start: 68 @49609 has 194 MA's), (Start: 74 @49633 has 7 MA's), (Start: 78 @49642 has 5 MA's), (110, 49741), (115, 49756), (156, 49957),

Gene: Moose\_60 Start: 39923, Stop: 39675, Start Num: 75

Candidate Starts for Moose\_60:

(36, 40019), (46, 39995), (64, 39965), (Start: 75 @39923 has 15 MA's), (Start: 82 @39911 has 1 MA's), (125, 39698),

Gene: Mozy\_86 Start: 47832, Stop: 48131, Start Num: 68

Candidate Starts for Mozy\_86:

(44, 47790), (52, 47808), (Start: 68 @47832 has 194 MA's), (Start: 73 @47853 has 2 MA's), (Start: 78 @47865 has 5 MA's), (133, 48033), (156, 48108),

Gene: Mozy\_91 Start: 49284, Stop: 49655, Start Num: 68

Candidate Starts for Mozy\_91:

(6, 49083), (8, 49095), (16, 49155), (20, 49167), (35, 49221), (Start: 68 @49284 has 194 MA's), (Start: 74 @49308 has 7 MA's), (Start: 78 @49317 has 5 MA's), (115, 49431), (156, 49632),

Gene: Mutaforma13\_86 Start: 49538, Stop: 49894, Start Num: 68

Candidate Starts for Mutaforma13\_86:

(44, 49496), (52, 49514), (Start: 68 @49538 has 194 MA's), (Start: 73 @49559 has 2 MA's), (132, 49775), (143, 49793), (146, 49805), (154, 49847), (156, 49871),

Gene: Mwanjiwa\_84 Start: 49794, Stop: 50060, Start Num: 73

Candidate Starts for Mwanjiwa\_84:

(Start: 68 @49773 has 194 MA's), (Start: 73 @49794 has 2 MA's), (79, 49809), (86, 49833), (115, 49926), (132, 50004), (150, 50040),

Gene: Myrale\_44 Start: 35984, Stop: 35688, Start Num: 61

Candidate Starts for Myrale\_44:

(Start: 61 @35984 has 15 MA's), (72, 35948), (Start: 78 @35930 has 5 MA's), (91, 35897), (102, 35855), (150, 35708),

Gene: Nekros\_70 Start: 48461, Stop: 48180, Start Num: 68

Candidate Starts for Nekros\_70:

(24, 48554), (30, 48530), (Start: 68 @48461 has 194 MA's), (Start: 74 @48437 has 7 MA's), (Start: 78 @48428 has 5 MA's), (89, 48395), (93, 48383), (94, 48380), (110, 48332), (115, 48317), (148, 48203),

Gene: Nichirin\_83 Start: 49518, Stop: 49811, Start Num: 68

Candidate Starts for Nichirin\_83:

(Start: 68 @49518 has 194 MA's), (Start: 73 @49539 has 2 MA's), (79, 49554), (115, 49680), (140, 49788),

Gene: Nichirin\_81 Start: 48986, Stop: 49306, Start Num: 68

Candidate Starts for Nichirin\_81:

(Start: 55 @48962 has 1 MA's), (Start: 68 @48986 has 194 MA's), (Start: 74 @49010 has 7 MA's), (97, 49085), (132, 49214), (150, 49250),

Gene: NihilNomen\_72 Start: 50300, Stop: 50007, Start Num: 68

Candidate Starts for NihilNomen\_72:

(Start: 68 @50300 has 194 MA's), (Start: 73 @50279 has 2 MA's), (Start: 78 @50267 has 5 MA's), (115, 50159), (120, 50111), (126, 50099), (133, 50072), (137, 50069), (150, 50030),

Gene: Nitzel\_78 Start: 46831, Stop: 47190, Start Num: 68

Candidate Starts for Nitzel\_78:

(43, 46792), (Start: 62 @46810 has 7 MA's), (Start: 68 @46831 has 194 MA's), (Start: 74 @46855 has 7 MA's), (Start: 78 @46864 has 5 MA's), (110, 46963), (115, 46978), (132, 47071), (143, 47089), (146, 47101), (154, 47143), (156, 47167),

Gene: NonchalantPear\_44 Start: 34915, Stop: 34544, Start Num: 68

Candidate Starts for NonchalantPear\_44:

(Start: 68 @34915 has 194 MA's), (Start: 74 @34888 has 7 MA's), (Start: 78 @34879 has 5 MA's), (89, 34846), (93, 34834), (94, 34831), (115, 34768), (120, 34714), (141, 34651), (152, 34609), (156, 34567),

Gene: NormanBulbieJr\_82 Start: 50191, Stop: 50472, Start Num: 68

Candidate Starts for NormanBulbieJr\_82:

(Start: 68 @50191 has 194 MA's), (Start: 74 @50212 has 7 MA's), (88, 50245), (132, 50416), (150, 50452),

Gene: Ochi17\_87 Start: 49219, Stop: 49539, Start Num: 68

Candidate Starts for Ochi17\_87:

(Start: 55 @49195 has 1 MA's), (Start: 68 @49219 has 194 MA's), (Start: 74 @49243 has 7 MA's), (97, 49318), (132, 49447), (150, 49483),

Gene: Ochi17\_89 Start: 49749, Stop: 50042, Start Num: 68

Candidate Starts for Ochi17\_89:

(Start: 68 @49749 has 194 MA's), (Start: 73 @49770 has 2 MA's), (79, 49785), (115, 49911), (140, 50019),

Gene: Odette\_70 Start: 49343, Stop: 49050, Start Num: 68

Candidate Starts for Odette\_70:

(Start: 68 @49343 has 194 MA's), (Start: 73 @49322 has 2 MA's), (Start: 78 @49310 has 5 MA's), (115, 49202), (120, 49154), (126, 49142), (133, 49115), (137, 49112), (150, 49073),

Gene: OfUltron\_91 Start: 50298, Stop: 50591, Start Num: 68

Candidate Starts for OfUltron\_91:

(Start: 68 @50298 has 194 MA's), (Start: 73 @50319 has 2 MA's), (79, 50334), (115, 50460), (140, 50568),

Gene: OfUltron\_89 Start: 49768, Stop: 50088, Start Num: 68

Candidate Starts for OfUltron\_89:

(Start: 55 @49744 has 1 MA's), (Start: 68 @49768 has 194 MA's), (Start: 74 @49792 has 7 MA's), (97, 49867), (132, 49996), (150, 50032),

Gene: Oksu\_86 Start: 50903, Stop: 51256, Start Num: 68

Candidate Starts for Oksu\_86:

(Start: 68 @50903 has 194 MA's), (Start: 73 @50924 has 2 MA's), (Start: 78 @50936 has 5 MA's), (115, 51044), (132, 51137), (143, 51155), (146, 51167), (154, 51209), (156, 51233),

Gene: OlympiaSaint\_85 Start: 50471, Stop: 50842, Start Num: 68

Candidate Starts for OlympiaSaint\_85:

(Start: 68 @50471 has 194 MA's), (Start: 74 @50495 has 7 MA's), (Start: 78 @50504 has 5 MA's), (110, 50603), (115, 50618), (156, 50819),

Gene: Omega\_77 Start: 51219, Stop: 50938, Start Num: 68

Candidate Starts for Omega\_77:

(Start: 68 @51219 has 194 MA's), (Start: 74 @51195 has 7 MA's), (Start: 78 @51186 has 5 MA's), (89, 51153), (93, 51141), (94, 51138), (115, 51075), (148, 50961),

Gene: Ovechkin\_89 Start: 50892, Stop: 51290, Start Num: 68

Candidate Starts for Ovechkin\_89:

(53, 50862), (58, 50868), (Start: 68 @50892 has 194 MA's), (79, 50928), (96, 50997), (108, 51054), (113, 51069), (115, 51078), (116, 51084), (132, 51171), (143, 51189), (146, 51201), (154, 51243), (156, 51267),

Gene: Pacc40\_73 Start: 48569, Stop: 48838, Start Num: 68

Candidate Starts for Pacc40\_73:

(Start: 68 @48569 has 194 MA's), (Start: 73 @48590 has 2 MA's), (111, 48689), (112, 48695), (150, 48815),

Gene: Paphu\_61 Start: 41641, Stop: 41261, Start Num: 75

Candidate Starts for Paphu\_61:

(15, 41842), (56, 41698), (59, 41695), (Start: 75 @41641 has 15 MA's), (84, 41620), (87, 41605), (115, 41479), (118, 41428), (134, 41380), (135, 41377), (156, 41284),

Gene: Parliament\_63 Start: 43433, Stop: 43053, Start Num: 75

Candidate Starts for Parliament\_63:

(15, 43634), (56, 43490), (59, 43487), (Start: 75 @43433 has 15 MA's), (84, 43412), (87, 43397), (115, 43271), (118, 43220), (134, 43172), (135, 43169), (156, 43076),

Gene: Petra64142\_42 Start: 35106, Stop: 34705, Start Num: 74

Candidate Starts for Petra64142\_42:

(43, 35169), (Start: 60 @35151 has 1 MA's), (Start: 68 @35130 has 194 MA's), (Start: 74 @35106 has 7 MA's), (Start: 78 @35097 has 5 MA's), (89, 35064), (93, 35052), (94, 35049), (115, 34986), (120, 34932), (141, 34869), (152, 34827), (157, 34776), (161, 34713),

Gene: Phaja\_42 Start: 35684, Stop: 35388, Start Num: 61

Candidate Starts for Phaja\_42:

(Start: 61 @35684 has 15 MA's), (72, 35648), (Start: 78 @35630 has 5 MA's), (91, 35597), (102, 35555), (150, 35408),

Gene: Phalconet\_82 Start: 49094, Stop: 49378, Start Num: 68

Candidate Starts for Phalconet\_82:

(Start: 68 @49094 has 194 MA's), (Start: 74 @49118 has 7 MA's), (Start: 78 @49127 has 5 MA's), (110, 49226), (115, 49241), (148, 49355),

Gene: Phanphagia\_84 Start: 50468, Stop: 50839, Start Num: 68

Candidate Starts for Phanphagia\_84:

(Start: 68 @50468 has 194 MA's), (Start: 74 @50492 has 7 MA's), (Start: 78 @50501 has 5 MA's), (110, 50600), (115, 50615), (156, 50816),

Gene: Phegasus\_60 Start: 38122, Stop: 38361, Start Num: 71

Candidate Starts for Phegasus\_60:

(Start: 71 @38122 has 14 MA's), (124, 38323), (138, 38350),

Gene: PhesterPhotato\_89 Start: 50262, Stop: 50546, Start Num: 68

Candidate Starts for PhesterPhotato\_89:

(Start: 68 @50262 has 194 MA's), (Start: 74 @50286 has 7 MA's), (Start: 78 @50295 has 5 MA's), (110, 50394), (115, 50409), (148, 50523),

Gene: Phoebus\_74 Start: 51482, Stop: 51129, Start Num: 68

Candidate Starts for Phoebus\_74:

(Start: 68 @51482 has 194 MA's), (Start: 73 @51461 has 2 MA's), (Start: 78 @51449 has 5 MA's), (115, 51341), (132, 51248), (143, 51230), (146, 51218), (154, 51176), (156, 51152),

Gene: Pippy\_76 Start: 47591, Stop: 47887, Start Num: 61

Candidate Starts for Pippy\_76:

(Start: 61 @47591 has 15 MA's), (72, 47627), (Start: 78 @47645 has 5 MA's), (91, 47678), (102, 47720), (132, 47831), (150, 47867),

Gene: Poenanya\_88 Start: 50710, Stop: 51087, Start Num: 62

Candidate Starts for Poenanya\_88:

(Start: 62 @50710 has 7 MA's), (Start: 74 @50752 has 7 MA's), (Start: 78 @50761 has 5 MA's), (115, 50875), (132, 50968), (143, 50986), (146, 50998), (154, 51040), (156, 51064),

Gene: Polka14\_89 Start: 51500, Stop: 51877, Start Num: 62

Candidate Starts for Polka14\_89:

(Start: 62 @51500 has 7 MA's), (Start: 74 @51542 has 7 MA's), (Start: 78 @51551 has 5 MA's), (110, 51650), (115, 51665), (132, 51758), (143, 51776), (146, 51788), (154, 51830), (156, 51854),

Gene: PopTart\_77 Start: 47157, Stop: 47441, Start Num: 68

Candidate Starts for PopTart\_77:

(Start: 68 @47157 has 194 MA's), (Start: 74 @47181 has 7 MA's), (Start: 78 @47190 has 5 MA's), (110, 47289), (115, 47304), (148, 47418),

Gene: Porcelain\_71 Start: 46608, Stop: 46255, Start Num: 68

Candidate Starts for Porcelain\_71:

(Start: 68 @46608 has 194 MA's), (Start: 73 @46587 has 2 MA's), (Start: 78 @46575 has 5 MA's), (115, 46467), (132, 46374), (143, 46356), (146, 46344), (154, 46302), (156, 46278),

Gene: Porky\_42 Start: 34896, Stop: 34549, Start Num: 74

Candidate Starts for Porky\_42:

(Start: 68 @34920 has 194 MA's), (Start: 74 @34896 has 7 MA's), (Start: 78 @34887 has 5 MA's), (115, 34773), (120, 34719), (141, 34656), (152, 34614), (156, 34572),

Gene: Pound\_75 Start: 52901, Stop: 52608, Start Num: 68

Candidate Starts for Pound\_75:

(Start: 68 @52901 has 194 MA's), (Start: 73 @52880 has 2 MA's), (Start: 78 @52868 has 5 MA's), (115, 52760), (120, 52712), (126, 52700), (133, 52673), (137, 52670), (150, 52631),

Gene: Pound\_77 Start: 53540, Stop: 53256, Start Num: 68

Candidate Starts for Pound\_77:

(Start: 55 @53564 has 1 MA's), (Start: 68 @53540 has 194 MA's), (Start: 74 @53516 has 7 MA's), (97, 53441), (132, 53312), (150, 53276),

Gene: Pringar\_9 Start: 2807, Stop: 3091, Start Num: 68

Candidate Starts for Pringar\_9:

(Start: 55 @2783 has 1 MA's), (Start: 68 @2807 has 194 MA's), (Start: 74 @2831 has 7 MA's), (97, 2906), (132, 3035), (150, 3071),

Gene: Priscilla\_84 Start: 50289, Stop: 50570, Start Num: 68

Candidate Starts for Priscilla\_84:

(Start: 68 @50289 has 194 MA's), (Start: 74 @50310 has 7 MA's), (88, 50343), (132, 50514), (150, 50550),

Gene: QuickMath\_80 Start: 48565, Stop: 48837, Start Num: 68

Candidate Starts for QuickMath\_80:

(Start: 68 @48565 has 194 MA's), (Start: 73 @48586 has 2 MA's), (Start: 78 @48598 has 5 MA's), (115, 48706), (150, 48814),

Gene: Quico\_91 Start: 51411, Stop: 51695, Start Num: 68

Candidate Starts for Quico\_91:

(Start: 68 @51411 has 194 MA's), (Start: 74 @51435 has 7 MA's), (Start: 78 @51444 has 5 MA's), (110, 51543), (115, 51558), (148, 51672),

Gene: Radiance\_80 Start: 49352, Stop: 49621, Start Num: 68

Candidate Starts for Radiance\_80:

(50, 49322), (57, 49328), (Start: 68 @49352 has 194 MA's), (Start: 73 @49373 has 2 MA's), (111, 49472), (112, 49478), (150, 49598),

Gene: Ramsey\_86 Start: 51149, Stop: 51520, Start Num: 68

Candidate Starts for Ramsey\_86:

(6, 50948), (8, 50960), (16, 51020), (20, 51032), (35, 51086), (Start: 68 @51149 has 194 MA's), (Start: 74 @51173 has 7 MA's), (Start: 78 @51182 has 5 MA's), (110, 51281), (115, 51296), (156, 51497),

Gene: Rearden\_66 Start: 46135, Stop: 45818, Start Num: 68

Candidate Starts for Rearden\_66:

(Start: 68 @46135 has 194 MA's), (Start: 74 @46111 has 7 MA's), (Start: 78 @46102 has 5 MA's), (89, 46069), (93, 46057), (94, 46054), (110, 46006), (115, 45991), (123, 45931), (156, 45841),

Gene: RedBird\_83 Start: 50910, Stop: 51281, Start Num: 68

Candidate Starts for RedBird\_83:

(6, 50709), (8, 50721), (16, 50781), (20, 50793), (35, 50847), (Start: 68 @50910 has 194 MA's), (Start: 74 @50934 has 7 MA's), (Start: 78 @50943 has 5 MA's), (110, 51042), (115, 51057), (156, 51258),

Gene: Redno2\_68 Start: 47096, Stop: 46803, Start Num: 68

Candidate Starts for Redno2\_68:

(Start: 68 @47096 has 194 MA's), (Start: 73 @47075 has 2 MA's), (Start: 78 @47063 has 5 MA's), (115, 46955), (120, 46907), (126, 46895), (133, 46868), (137, 46865), (150, 46826),

Gene: Redno2\_72 Start: 48485, Stop: 48225, Start Num: 74

Candidate Starts for Redno2\_72:

(Start: 68 @48509 has 194 MA's), (Start: 74 @48485 has 7 MA's), (97, 48410), (132, 48281), (150, 48245),

Gene: Renaud18\_93 Start: 50655, Stop: 50924, Start Num: 68

Candidate Starts for Renaud18\_93:

(Start: 68 @50655 has 194 MA's), (Start: 73 @50676 has 2 MA's), (79, 50691), (114, 50787), (150, 50901),

Gene: Rimmer\_40 Start: 34315, Stop: 33944, Start Num: 68

Candidate Starts for Rimmer\_40:

(43, 34354), (Start: 60 @34336 has 1 MA's), (Start: 68 @34315 has 194 MA's), (Start: 74 @34291 has 7 MA's), (Start: 78 @34282 has 5 MA's), (115, 34168), (120, 34114), (141, 34051), (152, 34009), (156, 33967),

Gene: Royals2015\_90 Start: 49759, Stop: 50043, Start Num: 68

Candidate Starts for Royals2015\_90:

(Start: 68 @49759 has 194 MA's), (Start: 74 @49783 has 7 MA's), (Start: 78 @49792 has 5 MA's), (110, 49891), (115, 49906), (148, 50020),

Gene: Royals2015\_86 Start: 48664, Stop: 48936, Start Num: 68

Candidate Starts for Royals2015\_86:

(44, 48622), (52, 48640), (Start: 68 @48664 has 194 MA's), (Start: 73 @48685 has 2 MA's), (Start: 78 @48697 has 5 MA's), (115, 48805), (150, 48913),

Gene: SG4\_86 Start: 50874, Stop: 51251, Start Num: 68

Candidate Starts for SG4\_86:

(Start: 68 @50874 has 194 MA's), (Start: 73 @50895 has 2 MA's), (79, 50910), (86, 50934), (115, 51027), (123, 51087), (156, 51228),

Gene: SG4\_84 Start: 50324, Stop: 50698, Start Num: 68

Candidate Starts for SG4\_84:

(Start: 68 @50324 has 194 MA's), (Start: 73 @50345 has 2 MA's), (79, 50360), (115, 50486), (136, 50579), (142, 50597), (145, 50609), (153, 50651), (156, 50675),

Gene: Sabbb\_83 Start: 46768, Stop: 47067, Start Num: 68

Candidate Starts for Sabbb\_83:

(Start: 68 @46768 has 194 MA's), (Start: 73 @46789 has 2 MA's), (79, 46804), (115, 46930), (140, 47044),

Gene: Sandalphon\_83 Start: 50748, Stop: 51119, Start Num: 68

Candidate Starts for Sandalphon\_83:

(Start: 68 @50748 has 194 MA's), (Start: 74 @50772 has 7 MA's), (Start: 78 @50781 has 5 MA's), (115, 50895), (156, 51096),

Gene: Sassafras\_83 Start: 49224, Stop: 49595, Start Num: 68

Candidate Starts for Sassafras\_83:

(6, 49023), (8, 49035), (16, 49095), (20, 49107), (35, 49161), (Start: 68 @49224 has 194 MA's), (Start: 74 @49248 has 7 MA's), (Start: 78 @49257 has 5 MA's), (110, 49356), (115, 49371), (156, 49572),

Gene: SassyB\_77 Start: 47157, Stop: 47441, Start Num: 68

Candidate Starts for SassyB\_77:

(Start: 68 @47157 has 194 MA's), (Start: 74 @47181 has 7 MA's), (Start: 78 @47190 has 5 MA's), (110, 47289), (115, 47304), (148, 47418),

Gene: Schatzie\_66 Start: 49090, Stop: 48797, Start Num: 68

Candidate Starts for Schatzie\_66:

(Start: 68 @49090 has 194 MA's), (Start: 73 @49069 has 2 MA's), (Start: 78 @49057 has 5 MA's), (115, 48949), (120, 48901), (126, 48889), (133, 48862), (137, 48859), (150, 48820),

Gene: Scottish\_83 Start: 49191, Stop: 49568, Start Num: 62

Candidate Starts for Scottish\_83:

(Start: 62 @49191 has 7 MA's), (Start: 74 @49233 has 7 MA's), (Start: 78 @49242 has 5 MA's), (110, 49341), (115, 49356), (132, 49449), (143, 49467), (146, 49479), (154, 49521), (156, 49545),

Gene: Seabastian\_91 Start: 50299, Stop: 50592, Start Num: 68

Candidate Starts for Seabastian\_91:

(Start: 68 @50299 has 194 MA's), (Start: 73 @50320 has 2 MA's), (79, 50335), (115, 50461), (140, 50569),

Gene: Seabastian\_89 Start: 49769, Stop: 50089, Start Num: 68  
Candidate Starts for Seabastian\_89:  
(Start: 55 @49745 has 1 MA's), (Start: 68 @49769 has 194 MA's), (Start: 74 @49793 has 7 MA's), (97, 49868), (132, 49997), (150, 50033),

Gene: Seagreen\_84 Start: 50260, Stop: 50628, Start Num: 68  
Candidate Starts for Seagreen\_84:  
(Start: 68 @50260 has 194 MA's), (Start: 74 @50284 has 7 MA's), (Start: 78 @50293 has 5 MA's), (89, 50326), (93, 50338), (94, 50341), (110, 50389), (115, 50404), (123, 50464), (156, 50605),

Gene: Seanderson\_61 Start: 42123, Stop: 41887, Start Num: 82  
Candidate Starts for Seanderson\_61:  
(36, 42231), (46, 42207), (64, 42177), (Start: 75 @42135 has 15 MA's), (Start: 82 @42123 has 1 MA's), (125, 41910),

Gene: Shaboozey\_64 Start: 44166, Stop: 43780, Start Num: 68  
Candidate Starts for Shaboozey\_64:  
(30, 44259), (39, 44235), (Start: 68 @44166 has 194 MA's), (Start: 73 @44145 has 2 MA's), (79, 44130), (115, 44004), (123, 43944), (156, 43803),

Gene: ShamWow\_44 Start: 36121, Stop: 35825, Start Num: 61  
Candidate Starts for ShamWow\_44:  
(Start: 61 @36121 has 15 MA's), (72, 36085), (Start: 78 @36067 has 5 MA's), (91, 36034), (102, 35992), (150, 35845),

Gene: Shauna1\_83 Start: 50441, Stop: 50812, Start Num: 68  
Candidate Starts for Shauna1\_83:  
(28, 50348), (32, 50372), (Start: 68 @50441 has 194 MA's), (Start: 74 @50465 has 7 MA's), (Start: 78 @50474 has 5 MA's), (110, 50573), (115, 50588), (156, 50789),

Gene: ShiLan\_85 Start: 51984, Stop: 52355, Start Num: 68  
Candidate Starts for ShiLan\_85:  
(Start: 68 @51984 has 194 MA's), (Start: 74 @52008 has 7 MA's), (Start: 78 @52017 has 5 MA's), (110, 52116), (115, 52131), (156, 52332),

Gene: ShowerHandel\_82 Start: 48717, Stop: 48983, Start Num: 65  
Candidate Starts for ShowerHandel\_82:  
(Start: 65 @48717 has 5 MA's), (Start: 73 @48744 has 2 MA's), (79, 48759), (115, 48849), (131, 48927), (147, 48963),

Gene: ShroomBoi\_82 Start: 49425, Stop: 49781, Start Num: 68  
Candidate Starts for ShroomBoi\_82:  
(44, 49383), (52, 49401), (Start: 68 @49425 has 194 MA's), (Start: 73 @49446 has 2 MA's), (Start: 78 @49458 has 5 MA's), (132, 49662), (143, 49680), (146, 49692), (154, 49734), (156, 49758),

Gene: SilverChicken\_91 Start: 49686, Stop: 50078, Start Num: 60  
Candidate Starts for SilverChicken\_91:  
(43, 49668), (Start: 60 @49686 has 1 MA's), (Start: 68 @49707 has 194 MA's), (Start: 74 @49731 has 7 MA's), (Start: 78 @49740 has 5 MA's), (110, 49839), (115, 49854), (156, 50055),

Gene: SimranZ1\_83 Start: 48924, Stop: 49286, Start Num: 68  
Candidate Starts for SimranZ1\_83:

(Start: 68 @48924 has 194 MA's), (Start: 73 @48945 has 2 MA's), (118, 49119), (134, 49167), (135, 49170), (156, 49263),

Gene: SkiPole\_66 Start: 41398, Stop: 41150, Start Num: 75

Candidate Starts for SkiPole\_66:

(10, 41611), (11, 41608), (13, 41605), (14, 41602), (36, 41494), (46, 41470), (64, 41440), (Start: 75 @41398 has 15 MA's), (Start: 82 @41386 has 1 MA's), (125, 41173),

Gene: Soul22\_84 Start: 47805, Stop: 48131, Start Num: 68

Candidate Starts for Soul22\_84:

(Start: 68 @47805 has 194 MA's), (Start: 78 @47838 has 5 MA's), (79, 47841), (86, 47868), (89, 47874), (115, 47994), (144, 48108),

Gene: Spartacus\_89 Start: 52261, Stop: 52542, Start Num: 68

Candidate Starts for Spartacus\_89:

(Start: 68 @52261 has 194 MA's), (Start: 74 @52285 has 7 MA's), (Start: 78 @52294 has 5 MA's), (115, 52408), (130, 52480), (132, 52486),

Gene: Spartacus\_87 Start: 51565, Stop: 51846, Start Num: 68

Candidate Starts for Spartacus\_87:

(Start: 68 @51565 has 194 MA's), (Start: 74 @51586 has 7 MA's), (88, 51619), (132, 51790), (150, 51826),

Gene: Spartacus\_90 Start: 52535, Stop: 52846, Start Num: 48

Candidate Starts for Spartacus\_90:

(Start: 48 @52535 has 5 MA's), (Start: 73 @52598 has 2 MA's), (112, 52703), (150, 52823),

Gene: Spoonbill\_81 Start: 47897, Stop: 48268, Start Num: 68

Candidate Starts for Spoonbill\_81:

(Start: 68 @47897 has 194 MA's), (Start: 74 @47921 has 7 MA's), (Start: 78 @47930 has 5 MA's), (110, 48029), (115, 48044), (156, 48245),

Gene: Sprinklers\_16 Start: 4916, Stop: 5194, Start Num: 68

Candidate Starts for Sprinklers\_16:

(49, 4877), (Start: 62 @4895 has 7 MA's), (Start: 68 @4916 has 194 MA's), (Start: 73 @4937 has 2 MA's), (Start: 78 @4949 has 5 MA's), (79, 4952), (85, 4967), (90, 4976), (132, 5138), (150, 5174),

Gene: Squint\_72 Start: 46727, Stop: 46374, Start Num: 68

Candidate Starts for Squint\_72:

(Start: 68 @46727 has 194 MA's), (Start: 73 @46706 has 2 MA's), (Start: 78 @46694 has 5 MA's), (115, 46586), (132, 46493), (143, 46475), (146, 46463), (154, 46421), (156, 46397),

Gene: Stap\_78 Start: 46857, Stop: 47246, Start Num: 63

Candidate Starts for Stap\_78:

(Start: 63 @46857 has 1 MA's), (Start: 74 @46899 has 7 MA's), (Start: 78 @46908 has 5 MA's), (110, 47007), (115, 47022), (120, 47076), (141, 47139), (152, 47181), (156, 47223),

Gene: StellaBean\_42 Start: 35445, Stop: 35149, Start Num: 61

Candidate Starts for StellaBean\_42:

(Start: 61 @35445 has 15 MA's), (72, 35409), (Start: 78 @35391 has 5 MA's), (91, 35358), (102, 35316), (150, 35169),

Gene: StormChicken\_41 Start: 34923, Stop: 34552, Start Num: 68

Candidate Starts for StormChicken\_41:

(43, 34962), (Start: 60 @34944 has 1 MA's), (Start: 68 @34923 has 194 MA's), (Start: 74 @34899 has 7 MA's), (Start: 78 @34890 has 5 MA's), (115, 34776), (120, 34722), (141, 34659), (152, 34617), (156, 34575),

Gene: Strokeseat\_81 Start: 47587, Stop: 47898, Start Num: 48

Candidate Starts for Strokeseat\_81:

(38, 47560), (Start: 48 @47587 has 5 MA's), (Start: 73 @47650 has 2 MA's), (112, 47755), (150, 47875),

Gene: Strokeseat\_80 Start: 47313, Stop: 47594, Start Num: 68

Candidate Starts for Strokeseat\_80:

(Start: 68 @47313 has 194 MA's), (Start: 74 @47337 has 7 MA's), (Start: 78 @47346 has 5 MA's), (115, 47460), (130, 47532), (132, 47538),

Gene: SuperGrey\_82 Start: 51027, Stop: 51305, Start Num: 68

Candidate Starts for SuperGrey\_82:

(49, 50988), (Start: 62 @51006 has 7 MA's), (Start: 68 @51027 has 194 MA's), (Start: 73 @51048 has 2 MA's), (Start: 78 @51060 has 5 MA's), (79, 51063), (85, 51078), (90, 51087), (132, 51249), (150, 51285),

Gene: SuperGrey\_84 Start: 51807, Stop: 52193, Start Num: 68

Candidate Starts for SuperGrey\_84:

(30, 51714), (39, 51738), (Start: 68 @51807 has 194 MA's), (Start: 73 @51828 has 2 MA's), (79, 51843), (115, 51969), (123, 52029), (156, 52170),

Gene: Superphikiman\_69 Start: 45818, Stop: 45525, Start Num: 68

Candidate Starts for Superphikiman\_69:

(Start: 68 @45818 has 194 MA's), (Start: 73 @45797 has 2 MA's), (Start: 78 @45785 has 5 MA's), (115, 45677), (120, 45629), (126, 45617), (133, 45590), (137, 45587), (150, 45548),

Gene: SwissCheese\_62 Start: 40423, Stop: 40175, Start Num: 75

Candidate Starts for SwissCheese\_62:

(36, 40519), (46, 40495), (64, 40465), (Start: 75 @40423 has 15 MA's), (Start: 82 @40411 has 1 MA's), (125, 40198),

Gene: TChen\_82 Start: 50420, Stop: 50776, Start Num: 68

Candidate Starts for TChen\_82:

(44, 50378), (52, 50396), (Start: 68 @50420 has 194 MA's), (Start: 73 @50441 has 2 MA's), (Start: 78 @50453 has 5 MA's), (132, 50657), (143, 50675), (146, 50687), (154, 50729), (156, 50753),

Gene: Taj\_92 Start: 52011, Stop: 52295, Start Num: 68

Candidate Starts for Taj\_92:

(25, 51912), (Start: 68 @52011 has 194 MA's), (Start: 74 @52035 has 7 MA's), (Start: 78 @52044 has 5 MA's), (110, 52143), (115, 52158), (148, 52272),

Gene: Tasp14\_65 Start: 42922, Stop: 42542, Start Num: 75

Candidate Starts for Tasp14\_65:

(15, 43123), (56, 42979), (59, 42976), (Start: 75 @42922 has 15 MA's), (84, 42901), (87, 42886), (115, 42760), (118, 42709), (134, 42661), (135, 42658), (156, 42565),

Gene: Tchotchke\_76 Start: 47691, Stop: 47990, Start Num: 62

Candidate Starts for Tchotchke\_76:

(49, 47673), (Start: 62 @47691 has 7 MA's), (Start: 68 @47712 has 194 MA's), (Start: 73 @47733 has 2 MA's), (Start: 78 @47745 has 5 MA's), (79, 47748), (85, 47763), (90, 47772), (132, 47934), (150, 47970),

Gene: TeamEdward\_41 Start: 34920, Stop: 34549, Start Num: 68

Candidate Starts for TeamEdward\_41:

(43, 34959), (Start: 60 @34941 has 1 MA's), (Start: 68 @34920 has 194 MA's), (Start: 74 @34896 has 7 MA's), (Start: 78 @34887 has 5 MA's), (115, 34773), (120, 34719), (141, 34656), (152, 34614), (156, 34572),

Gene: Teaspoon\_45 Start: 35627, Stop: 35256, Start Num: 68

Candidate Starts for Teaspoon\_45:

(Start: 68 @35627 has 194 MA's), (Start: 74 @35600 has 7 MA's), (Start: 78 @35591 has 5 MA's), (89, 35558), (93, 35546), (94, 35543), (115, 35480), (120, 35426), (141, 35363), (152, 35321), (156, 35279),

Gene: Techage\_55 Start: 36691, Stop: 36930, Start Num: 71

Candidate Starts for Techage\_55:

(Start: 71 @36691 has 14 MA's), (124, 36892), (138, 36919),

Gene: ThetaBob\_85 Start: 48938, Stop: 49243, Start Num: 68

Candidate Starts for ThetaBob\_85:

(Start: 68 @48938 has 194 MA's), (Start: 78 @48971 has 5 MA's), (79, 48974), (86, 49001), (89, 49007), (115, 49127), (134, 49202),

Gene: ThreeRngTarjay\_69 Start: 50376, Stop: 50083, Start Num: 68

Candidate Starts for ThreeRngTarjay\_69:

(Start: 68 @50376 has 194 MA's), (Start: 73 @50355 has 2 MA's), (Start: 78 @50343 has 5 MA's), (115, 50235), (120, 50187), (126, 50175), (133, 50148), (137, 50145), (150, 50106),

Gene: Tootsieroll\_80 Start: 50185, Stop: 50562, Start Num: 62

Candidate Starts for Tootsieroll\_80:

(Start: 62 @50185 has 7 MA's), (Start: 74 @50227 has 7 MA's), (Start: 78 @50236 has 5 MA's), (110, 50335), (115, 50350), (132, 50443), (143, 50461), (146, 50473), (154, 50515), (156, 50539),

Gene: Tortoise12\_58 Start: 37074, Stop: 37331, Start Num: 78

Candidate Starts for Tortoise12\_58:

(2, 36771), (5, 36792), (13, 36846), (31, 36948), (70, 37044), (Start: 78 @37074 has 5 MA's), (89, 37107), (121, 37248), (122, 37251), (124, 37254), (130, 37278), (132, 37284), (147, 37308),

Gene: Tortoise12\_60 Start: 37645, Stop: 37935, Start Num: 68

Candidate Starts for Tortoise12\_60:

(Start: 68 @37645 has 194 MA's), (76, 37675), (100, 37753), (105, 37768), (109, 37780), (115, 37798), (121, 37849), (127, 37861), (132, 37876), (147, 37900), (150, 37912), (152, 37918),

Gene: Toto\_43 Start: 36121, Stop: 35825, Start Num: 61

Candidate Starts for Toto\_43:

(Start: 61 @36121 has 15 MA's), (72, 36085), (Start: 78 @36067 has 5 MA's), (91, 36034), (102, 35992), (150, 35845),

Gene: Traaww1\_40 Start: 34923, Stop: 34648, Start Num: 68

Candidate Starts for Traaww1\_40:

(33, 34995), (42, 34971), (44, 34968), (Start: 68 @34923 has 194 MA's), (Start: 73 @34902 has 2 MA's), (Start: 78 @34890 has 5 MA's), (115, 34782), (132, 34704), (150, 34668),

Gene: Tuco\_45 Start: 36629, Stop: 36333, Start Num: 61

Candidate Starts for Tuco\_45:

(Start: 61 @36629 has 15 MA's), (72, 36593), (Start: 78 @36575 has 5 MA's), (91, 36542), (102, 36500), (150, 36353),

Gene: Tweety\_86 Start: 51088, Stop: 51372, Start Num: 68

Candidate Starts for Tweety\_86:

(Start: 68 @51088 has 194 MA's), (Start: 74 @51112 has 7 MA's), (Start: 78 @51121 has 5 MA's), (110, 51220), (115, 51235), (148, 51349),

Gene: VRedHorse\_80 Start: 46368, Stop: 46637, Start Num: 68

Candidate Starts for VRedHorse\_80:

(Start: 68 @46368 has 194 MA's), (Start: 73 @46389 has 2 MA's), (111, 46488), (112, 46494), (150, 46614),

Gene: Velveteen\_75 Start: 45597, Stop: 45905, Start Num: 55

Candidate Starts for Velveteen\_75:

(Start: 55 @45597 has 1 MA's), (Start: 68 @45621 has 194 MA's), (Start: 74 @45645 has 7 MA's), (97, 45720), (132, 45849), (150, 45885),

Gene: Venti\_55 Start: 36580, Stop: 36819, Start Num: 71

Candidate Starts for Venti\_55:

(Start: 71 @36580 has 14 MA's), (124, 36781), (138, 36808),

Gene: Violac\_87 Start: 51567, Stop: 51926, Start Num: 68

Candidate Starts for Violac\_87:

(Start: 68 @51567 has 194 MA's), (Start: 74 @51591 has 7 MA's), (Start: 78 @51600 has 5 MA's), (110, 51699), (115, 51714), (132, 51807), (143, 51825), (146, 51837), (154, 51879), (156, 51903),

Gene: Wachhund\_81 Start: 46941, Stop: 47240, Start Num: 68

Candidate Starts for Wachhund\_81:

(Start: 68 @46941 has 194 MA's), (Start: 73 @46962 has 2 MA's), (79, 46977), (115, 47103), (140, 47217),

Gene: Wanda\_75 Start: 49838, Stop: 49545, Start Num: 68

Candidate Starts for Wanda\_75:

(Start: 68 @49838 has 194 MA's), (Start: 73 @49817 has 2 MA's), (Start: 78 @49805 has 5 MA's), (115, 49697), (120, 49649), (126, 49637), (133, 49610), (137, 49607), (150, 49568),

Gene: Wee\_91 Start: 52087, Stop: 52371, Start Num: 68

Candidate Starts for Wee\_91:

(Start: 68 @52087 has 194 MA's), (Start: 74 @52111 has 7 MA's), (Start: 78 @52120 has 5 MA's), (110, 52219), (115, 52234), (148, 52348),

Gene: Whatsapiecost\_74 Start: 44329, Stop: 44613, Start Num: 68

Candidate Starts for Whatsapiecost\_74:

(Start: 68 @44329 has 194 MA's), (Start: 74 @44353 has 7 MA's), (Start: 78 @44362 has 5 MA's), (115, 44476), (148, 44590),

Gene: Whatsapiecost\_76 Start: 44789, Stop: 45166, Start Num: 68

Candidate Starts for Whatsapiecost\_76:

(Start: 68 @44789 has 194 MA's), (Start: 73 @44810 has 2 MA's), (79, 44825), (86, 44849), (115, 44942), (123, 45002), (156, 45143),

Gene: Wheeler\_63 Start: 41547, Stop: 41161, Start Num: 75

Candidate Starts for Wheeler\_63:

(15, 41748), (56, 41604), (59, 41601), (Start: 75 @41547 has 15 MA's), (Start: 82 @41535 has 1 MA's), (156, 41184),

Gene: WillSterrel\_82 Start: 50063, Stop: 50434, Start Num: 68

Candidate Starts for WillSterrel\_82:

(Start: 68 @50063 has 194 MA's), (Start: 74 @50087 has 7 MA's), (Start: 78 @50096 has 5 MA's), (110, 50195), (115, 50210), (156, 50411),

Gene: Yeet\_69 Start: 49362, Stop: 49069, Start Num: 68

Candidate Starts for Yeet\_69:

(Start: 68 @49362 has 194 MA's), (Start: 73 @49341 has 2 MA's), (Start: 78 @49329 has 5 MA's), (115, 49221), (120, 49173), (126, 49161), (133, 49134), (137, 49131), (150, 49092),

Gene: Yoshi\_92 Start: 49392, Stop: 49736, Start Num: 65

Candidate Starts for Yoshi\_92:

(Start: 65 @49392 has 5 MA's), (Start: 73 @49419 has 2 MA's), (79, 49434), (115, 49524), (151, 49665), (155, 49692), (156, 49713),

Gene: Youngblood\_41 Start: 34902, Stop: 34555, Start Num: 74

Candidate Starts for Youngblood\_41:

(43, 34965), (Start: 60 @34947 has 1 MA's), (Start: 68 @34926 has 194 MA's), (Start: 74 @34902 has 7 MA's), (Start: 78 @34893 has 5 MA's), (115, 34779), (120, 34725), (141, 34662), (152, 34620), (156, 34578),

Gene: Zelink\_69 Start: 50689, Stop: 50396, Start Num: 68

Candidate Starts for Zelink\_69:

(Start: 68 @50689 has 194 MA's), (Start: 73 @50668 has 2 MA's), (Start: 78 @50656 has 5 MA's), (115, 50548), (120, 50500), (126, 50488), (133, 50461), (137, 50458), (150, 50419),

Gene: ZenTime222\_56 Start: 39238, Stop: 39498, Start Num: 78

Candidate Starts for ZenTime222\_56:

(2, 38935), (5, 38956), (13, 39010), (31, 39112), (70, 39208), (Start: 78 @39238 has 5 MA's), (89, 39271), (121, 39412), (127, 39424), (132, 39439), (147, 39463), (150, 39475), (152, 39481),

Gene: Zerg\_82 Start: 49172, Stop: 49456, Start Num: 68

Candidate Starts for Zerg\_82:

(Start: 55 @49148 has 1 MA's), (Start: 68 @49172 has 194 MA's), (Start: 74 @49196 has 7 MA's), (97, 49271), (132, 49400), (150, 49436),

Gene: Zeuska\_63 Start: 42656, Stop: 42396, Start Num: 74

Candidate Starts for Zeuska\_63:

(Start: 68 @42680 has 194 MA's), (Start: 74 @42656 has 7 MA's), (Start: 78 @42647 has 5 MA's), (115, 42533), (148, 42419),

Gene: Zeuska\_61 Start: 42220, Stop: 41843, Start Num: 68

Candidate Starts for Zeuska\_61:

(Start: 68 @42220 has 194 MA's), (Start: 73 @42199 has 2 MA's), (79, 42184), (86, 42160), (115, 42067), (156, 41866),

Gene: Zilizebeth\_60 Start: 38146, Stop: 38385, Start Num: 71

Candidate Starts for Zilizebeth\_60:

(Start: 71 @38146 has 14 MA's), (124, 38347), (138, 38374),

Gene: Zizzle\_86 Start: 51134, Stop: 51478, Start Num: 65

Candidate Starts for Zizzle\_86:

(Start: 65 @51134 has 5 MA's), (Start: 73 @51161 has 2 MA's), (79, 51176), (115, 51266), (132, 51359), (143, 51377), (146, 51389), (154, 51431), (156, 51455),