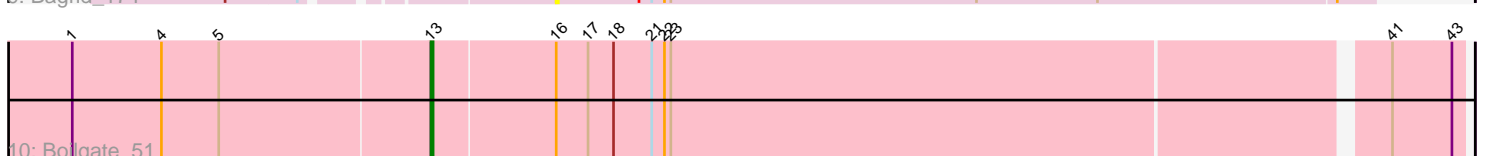
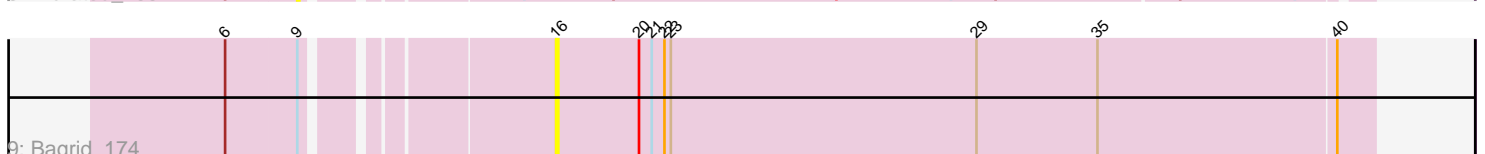
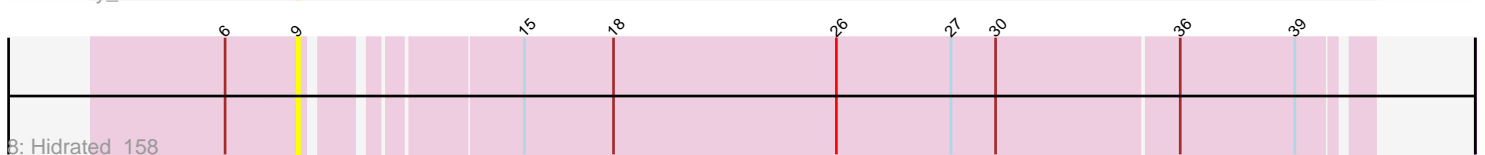
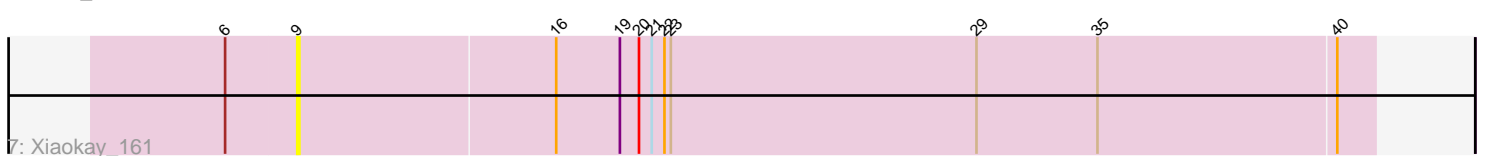
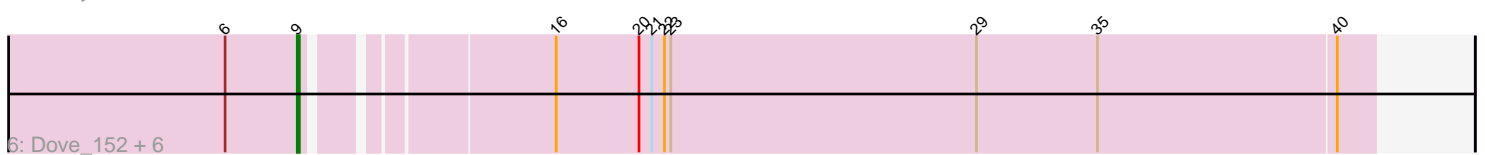
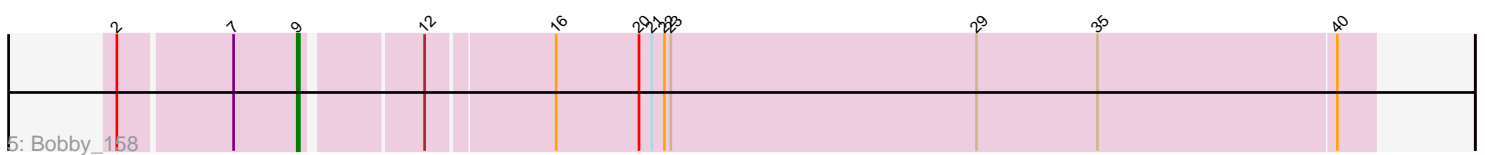
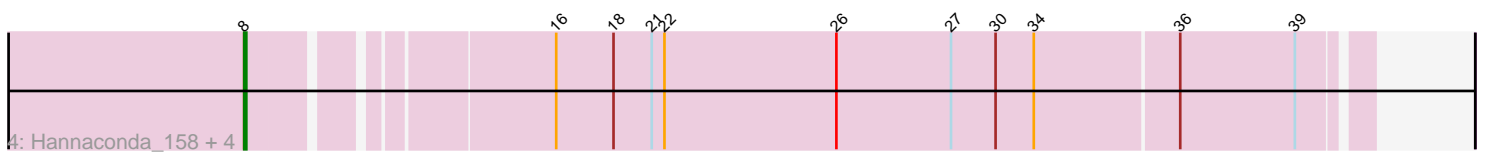
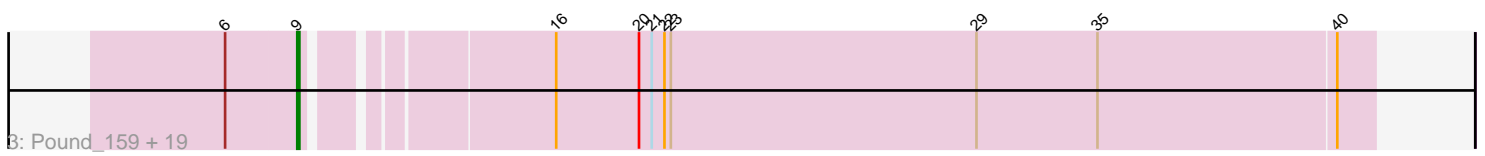
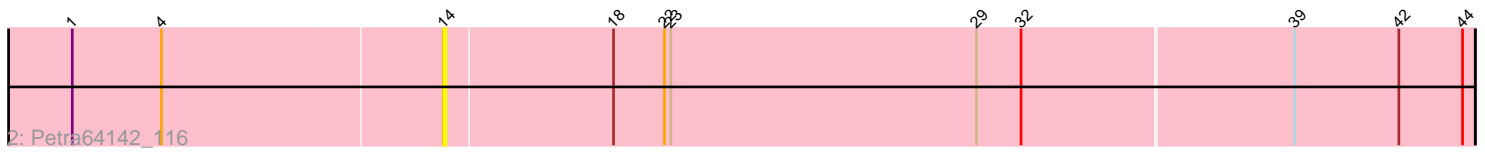
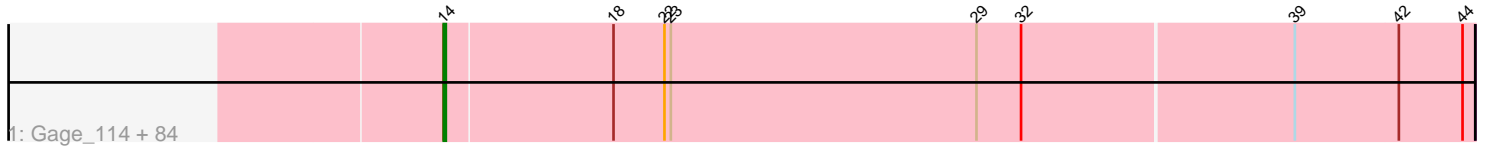


Pham 304818



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 304818 Report

This analysis was run 06/08/26 on database version 649.

Pham number 304818 has 125 members, 16 are drafts.

Phages represented in each track:

- Track 1 : Gage\_114, Eureka\_112, Murphy\_111, Lilpickle\_111, HanKaySha\_112, Paperbeatsrock\_111, PhatBacter\_115, Adnama\_116, RiverMonster\_111, Contagion\_109, Bench\_114, Murica\_116, Lilizi\_112, Greep\_116, ChosenOne\_112, Hopey\_112, Phaux\_114, Stark\_112, Moldemort\_114, Emmina\_112, Pumpkin\_113, Bruin\_109, Brewer\_108, Tarkin\_111, Sassay\_107, Elite2014\_111, Misfit\_113, GoldenSpark\_116, Miniwave\_107, Manda\_113, xkcd\_116, NelitzaMV\_109, Maxxinista\_114, StolenFromERC\_114, Buck\_113, FairyPath\_113, Ukulele\_107, TeamEdward\_112, PaddyBaddy\_111, Dumbo\_112, Saints25\_108, Cjw1\_112, AmericanBeauty\_115, Quallification\_113, MPhalcon\_113, YassJohnny\_109, Easy2Say\_112, Becksu\_110, Hoonter\_115, Youngblood\_116, Gemini\_117, Ptowny\_108, FireRed\_115, Lilac\_113, Czyszczo1\_112, Policronamos\_115, Thresher\_113, Rimmer\_110, Argent26\_116, StellaBean\_110, Pharsalus\_109, Terminus\_115, Palpatine\_113, BugsBunny\_111, Bogg\_113, Nala\_114, Thimble\_114, Highbury\_108, Elph10\_111, NoSleep\_112, Willez\_107, ShereKhan\_110, MollyToe\_106, Kanye\_109, Mosby\_109, HufflyPuff\_114, MadamMonkfish\_111, OrionPax\_110, Liveloughbron\_113, MISSy\_113, Tomaszewski\_107, Phrux\_108, GooberAzure\_115, NonchalantPear\_112, Simpliphy\_110
- Track 2 : Petra64142\_116
- Track 3 : Pound\_159, Beem\_166, BAKA\_171, Minerva\_165, Constella\_161, Klein\_169, Optimus\_164, Kalah2\_162, Ejimix\_156, Halley\_166, Duke13\_168, Yeet\_157, Hughesyang\_164, Odette\_169, Zelink\_158, ThreeRngTarjay\_162, Schatzie\_160, EricMillard\_163, Dallas\_165, Wanda\_163
- Track 4 : Hannaconda\_158, KashFlow\_163, Omega\_174, Rearden\_165, Gonephishing\_159
- Track 5 : Bobby\_158
- Track 6 : Dove\_152, Phoebus\_166, HokkenD\_160, Redno2\_159, Bombitas\_152, JuicyJay\_160, NihilNomen\_167
- Track 7 : Xiaokay\_161
- Track 8 : Hidrated\_158
- Track 9 : Bagrid\_174
- Track 10 : Boilgate\_51
- Track 11 : Gaia\_127, Nebkiss\_128

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

The start number called the most often in the published annotations is 14, it was called in 76 of the 109 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Adnama\_116, AmericanBeauty\_115, Argent26\_116, Becksu\_110, Bench\_114, Bogg\_113, Brewer\_108, Bruin\_109, Buck\_113, BugsBunny\_111, ChosenOne\_112, Cjw1\_112, Contagion\_109, Czyszczo1\_112, Dumbo\_112, Easy2Say\_112, Elite2014\_111, Elph10\_111, Emmina\_112, Eureka\_112, FairyPath\_113, FireRed\_115, Gage\_114, Gemini\_117, GoldenSpark\_116, GooberAzure\_115, Greep\_116, HanKaySha\_112, Highbury\_108, Hoonter\_115, Hopey\_112, HufflyPuff\_114, Kanye\_109, Lilac\_113, Lilizi\_112, Lilpickle\_111, Liveloughbron\_113, MISSy\_113, MPhalcon\_113, MadamMonkfish\_111, Manda\_113, Maxxinista\_114, Miniwave\_107, Misfit\_113, Moldemort\_114, MollyToe\_106, Mosby\_109, Murica\_116, Murphy\_111, Nala\_114, NelitzaMV\_109, NoSleep\_112, NonchalantPear\_112, OrionPax\_110, PaddyBaddy\_111, Palpatine\_113, Paperbeatsrock\_111, Petra64142\_116, Pharsalus\_109, PhatBacter\_115, Phaux\_114, Phrux\_108, Policronamos\_115, Ptowny\_108, Pumpkin\_113, Qualification\_113, Rimmer\_110, RiverMonster\_111, Saints25\_108, Sassay\_107, ShereKhan\_110, Simpliphy\_110, Stark\_112, StellaBean\_110, StolenFromERC\_114, Tarkin\_111, TeamEdward\_112, Terminus\_115, Thimble\_114, Thresher\_113, Tomaszewski\_107, Ukulele\_107, Willez\_107, YassJohnny\_109, Youngblood\_116, xkcd\_116,

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

- 

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

- BAKA\_171, Bagrid\_174, Beem\_166, Bobby\_158, Boilgate\_51, Bombitas\_152, Constella\_161, Dallas\_165, Dove\_152, Duke13\_168, Ejimix\_156, EricMillard\_163, Gaia\_127, Gonephishing\_159, Halley\_166, Hannaconda\_158, Hidrated\_158, HokkenD\_160, Hughesyang\_164, JuicyJay\_160, Kalah2\_162, KashFlow\_163, Klein\_169, Minerva\_165, Nebkiss\_128, NihilNomen\_167, Odette\_169, Omega\_174, Optimus\_164, Phoebus\_166, Pound\_159, Rearden\_165, Redno2\_159, Schatzie\_160, ThreeRngTarjay\_162, Wanda\_163, Xiaokay\_161, Yeet\_157, Zelink\_158,

### Summary by start number:

Start 3:

- Found in 2 of 125 ( 1.6% ) of genes in pham
- Manual Annotations of this start: 2 of 109
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gaia\_127 (X), Nebkiss\_128 (X),

Start 8:

- Found in 5 of 125 ( 4.0% ) of genes in pham
- Manual Annotations of this start: 3 of 109
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gonephishing\_159 (J), Hannaconda\_158 (J), KashFlow\_163 (J), Omega\_174 (J), Rearden\_165 (J),

Start 9:

- Found in 31 of 125 ( 24.8% ) of genes in pham

- Manual Annotations of this start: 27 of 109
- Called 96.8% of time when present
- Phage (with cluster) where this start called: BAKA\_171 (J), Beem\_166 (J), Bobby\_158 (J), Bombitas\_152 (J), Constella\_161 (J), Dallas\_165 (J), Dove\_152 (J), Duke13\_168 (J), Ejimix\_156 (J), EricMillard\_163 (J), Halley\_166 (J), Hidrated\_158 (J), HokkenD\_160 (J), Hughesyang\_164 (J), JuicyJay\_160 (J), Kalah2\_162 (J), Klein\_169 (J), Minerva\_165 (J), NihilNomen\_167 (J), Odette\_169 (J), Optimus\_164 (J), Phoebus\_166 (J), Pound\_159 (J), Redno2\_159 (J), Schatzie\_160 (J), ThreeRngTarjay\_162 (J), Wanda\_163 (J), Xiaokay\_161 (J), Yeet\_157 (J), Zelink\_158 (J),

#### Start 13:

- Found in 1 of 125 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 1 of 109
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Boilgate\_51 (K8),

#### Start 14:

- Found in 86 of 125 ( 68.8% ) of genes in pham
- Manual Annotations of this start: 76 of 109
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Adnama\_116 (E), AmericanBeauty\_115 (E), Argent26\_116 (E), Becksu\_110 (E), Bench\_114 (E), Bogg\_113 (E), Brewer\_108 (E), Bruin\_109 (E), Buck\_113 (E), BugsBunny\_111 (E), ChosenOne\_112 (E), Cjw1\_112 (E), Contagion\_109 (E), Czyszczonek\_112 (E), Dumbo\_112 (E), Easy2Say\_112 (E), Elite2014\_111 (E), Elph10\_111 (E), Emmina\_112 (E), Eureka\_112 (E), FairyPath\_113 (E), FireRed\_115 (E), Gage\_114 (E), Gemini\_117 (E), GoldenSpark\_116 (E), GooberAzure\_115 (E), Greep\_116 (E), HanKaySha\_112 (E), Highbury\_108 (E), Hoonter\_115 (E), Hopey\_112 (E), HufflyPuff\_114 (E), Kanye\_109 (E), Lilac\_113 (E), Lilizi\_112 (E), Lilipickle\_111 (E), Liveloughbron\_113 (E), MISSy\_113 (E), MPhalcon\_113 (E), MadamMonkfish\_111 (E), Manda\_113 (E), Maxxinista\_114 (E), Miniwave\_107 (E), Misfit\_113 (E), Moldemort\_114 (E), MollyToe\_106 (E), Mosby\_109 (E), Murica\_116 (E), Murphy\_111 (E), Nala\_114 (E), NelitzaMV\_109 (E), NoSleep\_112 (E), NonchalantPear\_112 (E), OrionPax\_110 (E), PaddyBaddy\_111 (E), Palpatine\_113 (E), Paperbeatsrock\_111 (E), Petra64142\_116 (E), Pharsalus\_109 (E), PhatBacter\_115 (E), Phaux\_114 (E), Phrux\_108 (E), Policronamos\_115 (E), Ptowny\_108 (E), Pumpkin\_113 (E), Quallification\_113 (E), Rimmer\_110 (E), RiverMonster\_111 (E), Saints25\_108 (E), Sassay\_107 (E), ShereKhan\_110 (E), Simpliphy\_110 (E), Stark\_112 (E), StellaBean\_110 (E), StolenFromERC\_114 (E), Tarkin\_111 (E), TeamEdward\_112 (E), Terminus\_115 (E), Thimble\_114 (E), Thresher\_113 (E), Tomaszewski\_107 (E), Ukulele\_107 (E), Willez\_107 (E), YassJohnny\_109 (E), Youngblood\_116 (E), xkcd\_116 (E),

#### Start 16:

- Found in 36 of 125 ( 28.8% ) of genes in pham
- No Manual Annotations of this start.
- Called 2.8% of time when present
- Phage (with cluster) where this start called: Bagrid\_174 (J),

### Summary by clusters:

There are 4 clusters represented in this pham: K8, X, J, E,

Info for manual annotations of cluster E:

- Start number 14 was manually annotated 76 times for cluster E.

Info for manual annotations of cluster J:

- Start number 8 was manually annotated 3 times for cluster J.
- Start number 9 was manually annotated 27 times for cluster J.

Info for manual annotations of cluster K8:

- Start number 13 was manually annotated 1 time for cluster K8.

Info for manual annotations of cluster X:

- Start number 3 was manually annotated 2 times for cluster X.

### **Gene Information:**

Gene: Adnama\_116 Start: 63697, Stop: 64176, Start Num: 14

Candidate Starts for Adnama\_116:

(Start: 14 @63697 has 76 MA's), (18, 63775), (22, 63799), (23, 63802), (29, 63946), (32, 63967), (39, 64093), (42, 64141), (44, 64171),

Gene: AmericanBeauty\_115 Start: 63739, Stop: 64218, Start Num: 14

Candidate Starts for AmericanBeauty\_115:

(Start: 14 @63739 has 76 MA's), (18, 63817), (22, 63841), (23, 63844), (29, 63988), (32, 64009), (39, 64135), (42, 64183), (44, 64213),

Gene: Argent26\_116 Start: 63621, Stop: 64100, Start Num: 14

Candidate Starts for Argent26\_116:

(Start: 14 @63621 has 76 MA's), (18, 63699), (22, 63723), (23, 63726), (29, 63870), (32, 63891), (39, 64017), (42, 64065), (44, 64095),

Gene: BAKA\_171 Start: 89814, Stop: 90299, Start Num: 9

Candidate Starts for BAKA\_171:

(6, 89781), (Start: 9 @89814 has 27 MA's), (16, 89916), (20, 89955), (21, 89961), (22, 89967), (23, 89970), (29, 90114), (35, 90171), (40, 90282),

Gene: Bagrid\_174 Start: 90278, Stop: 90661, Start Num: 16

Candidate Starts for Bagrid\_174:

(6, 90143), (Start: 9 @90176 has 27 MA's), (16, 90278), (20, 90317), (21, 90323), (22, 90329), (23, 90332), (29, 90476), (35, 90533), (40, 90644),

Gene: Becksu\_110 Start: 64010, Stop: 64489, Start Num: 14

Candidate Starts for Becksu\_110:

(Start: 14 @64010 has 76 MA's), (18, 64088), (22, 64112), (23, 64115), (29, 64259), (32, 64280), (39, 64406), (42, 64454), (44, 64484),

Gene: Beem\_166 Start: 88969, Stop: 89454, Start Num: 9

Candidate Starts for Beem\_166:

(6, 88936), (Start: 9 @88969 has 27 MA's), (16, 89071), (20, 89110), (21, 89116), (22, 89122), (23, 89125), (29, 89269), (35, 89326), (40, 89437),

Gene: Bench\_114 Start: 64378, Stop: 64857, Start Num: 14

Candidate Starts for Bench\_114:

(Start: 14 @64378 has 76 MA's), (18, 64456), (22, 64480), (23, 64483), (29, 64627), (32, 64648), (39, 64774), (42, 64822), (44, 64852),

Gene: Bobby\_158 Start: 89958, Stop: 90449, Start Num: 9

Candidate Starts for Bobby\_158:

(2, 89877), (7, 89928), (Start: 9 @89958 has 27 MA's), (12, 90009), (16, 90066), (20, 90105), (21, 90111), (22, 90117), (23, 90120), (29, 90264), (35, 90321), (40, 90432),

Gene: Bogg\_113 Start: 63897, Stop: 64376, Start Num: 14

Candidate Starts for Bogg\_113:

(Start: 14 @63897 has 76 MA's), (18, 63975), (22, 63999), (23, 64002), (29, 64146), (32, 64167), (39, 64293), (42, 64341), (44, 64371),

Gene: Boilgate\_51 Start: 39018, Stop: 39488, Start Num: 13

Candidate Starts for Boilgate\_51:

(1, 38853), (4, 38895), (5, 38922), (Start: 13 @39018 has 1 MA's), (16, 39075), (17, 39090), (18, 39102), (21, 39120), (22, 39126), (23, 39129), (41, 39456), (43, 39483),

Gene: Bombitas\_152 Start: 85199, Stop: 85684, Start Num: 9

Candidate Starts for Bombitas\_152:

(6, 85166), (Start: 9 @85199 has 27 MA's), (16, 85301), (20, 85340), (21, 85346), (22, 85352), (23, 85355), (29, 85499), (35, 85556), (40, 85667),

Gene: Brewer\_108 Start: 62534, Stop: 63013, Start Num: 14

Candidate Starts for Brewer\_108:

(Start: 14 @62534 has 76 MA's), (18, 62612), (22, 62636), (23, 62639), (29, 62783), (32, 62804), (39, 62930), (42, 62978), (44, 63008),

Gene: Bruin\_109 Start: 63062, Stop: 63541, Start Num: 14

Candidate Starts for Bruin\_109:

(Start: 14 @63062 has 76 MA's), (18, 63140), (22, 63164), (23, 63167), (29, 63311), (32, 63332), (39, 63458), (42, 63506), (44, 63536),

Gene: Buck\_113 Start: 64878, Stop: 65357, Start Num: 14

Candidate Starts for Buck\_113:

(Start: 14 @64878 has 76 MA's), (18, 64956), (22, 64980), (23, 64983), (29, 65127), (32, 65148), (39, 65274), (42, 65322), (44, 65352),

Gene: BugsBunny\_111 Start: 64376, Stop: 64855, Start Num: 14

Candidate Starts for BugsBunny\_111:

(Start: 14 @64376 has 76 MA's), (18, 64454), (22, 64478), (23, 64481), (29, 64625), (32, 64646), (39, 64772), (42, 64820), (44, 64850),

Gene: ChosenOne\_112 Start: 63262, Stop: 63741, Start Num: 14

Candidate Starts for ChosenOne\_112:

(Start: 14 @63262 has 76 MA's), (18, 63340), (22, 63364), (23, 63367), (29, 63511), (32, 63532), (39, 63658), (42, 63706), (44, 63736),

Gene: Cjw1\_112 Start: 65071, Stop: 65550, Start Num: 14

Candidate Starts for Cjw1\_112:

(Start: 14 @65071 has 76 MA's), (18, 65149), (22, 65173), (23, 65176), (29, 65320), (32, 65341), (39, 65467), (42, 65515), (44, 65545),

Gene: Constella\_161 Start: 87703, Stop: 88188, Start Num: 9

Candidate Starts for Constella\_161:

(6, 87670), (Start: 9 @87703 has 27 MA's), (16, 87805), (20, 87844), (21, 87850), (22, 87856), (23, 87859), (29, 88003), (35, 88060), (40, 88171),

Gene: Contagion\_109 Start: 63424, Stop: 63903, Start Num: 14

Candidate Starts for Contagion\_109:

(Start: 14 @63424 has 76 MA's), (18, 63502), (22, 63526), (23, 63529), (29, 63673), (32, 63694), (39, 63820), (42, 63868), (44, 63898),

Gene: Czyszczone1\_112 Start: 63417, Stop: 63896, Start Num: 14

Candidate Starts for Czyszczone1\_112:

(Start: 14 @63417 has 76 MA's), (18, 63495), (22, 63519), (23, 63522), (29, 63666), (32, 63687), (39, 63813), (42, 63861), (44, 63891),

Gene: Dallas\_165 Start: 88192, Stop: 88677, Start Num: 9

Candidate Starts for Dallas\_165:

(6, 88159), (Start: 9 @88192 has 27 MA's), (16, 88294), (20, 88333), (21, 88339), (22, 88345), (23, 88348), (29, 88492), (35, 88549), (40, 88660),

Gene: Dove\_152 Start: 83555, Stop: 84040, Start Num: 9

Candidate Starts for Dove\_152:

(6, 83522), (Start: 9 @83555 has 27 MA's), (16, 83657), (20, 83696), (21, 83702), (22, 83708), (23, 83711), (29, 83855), (35, 83912), (40, 84023),

Gene: Duke13\_168 Start: 88310, Stop: 88795, Start Num: 9

Candidate Starts for Duke13\_168:

(6, 88277), (Start: 9 @88310 has 27 MA's), (16, 88412), (20, 88451), (21, 88457), (22, 88463), (23, 88466), (29, 88610), (35, 88667), (40, 88778),

Gene: Dumbo\_112 Start: 63454, Stop: 63933, Start Num: 14

Candidate Starts for Dumbo\_112:

(Start: 14 @63454 has 76 MA's), (18, 63532), (22, 63556), (23, 63559), (29, 63703), (32, 63724), (39, 63850), (42, 63898), (44, 63928),

Gene: Easy2Say\_112 Start: 64088, Stop: 64567, Start Num: 14

Candidate Starts for Easy2Say\_112:

(Start: 14 @64088 has 76 MA's), (18, 64166), (22, 64190), (23, 64193), (29, 64337), (32, 64358), (39, 64484), (42, 64532), (44, 64562),

Gene: Ejimix\_156 Start: 87180, Stop: 87665, Start Num: 9

Candidate Starts for Ejimix\_156:

(6, 87147), (Start: 9 @87180 has 27 MA's), (16, 87282), (20, 87321), (21, 87327), (22, 87333), (23, 87336), (29, 87480), (35, 87537), (40, 87648),

Gene: Elite2014\_111 Start: 63261, Stop: 63740, Start Num: 14

Candidate Starts for Elite2014\_111:

(Start: 14 @63261 has 76 MA's), (18, 63339), (22, 63363), (23, 63366), (29, 63510), (32, 63531), (39, 63657), (42, 63705), (44, 63735),

Gene: Elph10\_111 Start: 63100, Stop: 63579, Start Num: 14

Candidate Starts for Elph10\_111:

(Start: 14 @63100 has 76 MA's), (18, 63178), (22, 63202), (23, 63205), (29, 63349), (32, 63370), (39, 63496), (42, 63544), (44, 63574),

Gene: Emmina\_112 Start: 63039, Stop: 63518, Start Num: 14

Candidate Starts for Emmina\_112:

(Start: 14 @63039 has 76 MA's), (18, 63117), (22, 63141), (23, 63144), (29, 63288), (32, 63309), (39, 63435), (42, 63483), (44, 63513),

Gene: EricMillard\_163 Start: 88786, Stop: 89271, Start Num: 9

Candidate Starts for EricMillard\_163:

(6, 88753), (Start: 9 @88786 has 27 MA's), (16, 88888), (20, 88927), (21, 88933), (22, 88939), (23, 88942), (29, 89086), (35, 89143), (40, 89254),

Gene: Eureka\_112 Start: 64227, Stop: 64706, Start Num: 14

Candidate Starts for Eureka\_112:

(Start: 14 @64227 has 76 MA's), (18, 64305), (22, 64329), (23, 64332), (29, 64476), (32, 64497), (39, 64623), (42, 64671), (44, 64701),

Gene: FairyPath\_113 Start: 64532, Stop: 65011, Start Num: 14

Candidate Starts for FairyPath\_113:

(Start: 14 @64532 has 76 MA's), (18, 64610), (22, 64634), (23, 64637), (29, 64781), (32, 64802), (39, 64928), (42, 64976), (44, 65006),

Gene: FireRed\_115 Start: 64503, Stop: 64982, Start Num: 14

Candidate Starts for FireRed\_115:

(Start: 14 @64503 has 76 MA's), (18, 64581), (22, 64605), (23, 64608), (29, 64752), (32, 64773), (39, 64899), (42, 64947), (44, 64977),

Gene: Gage\_114 Start: 63759, Stop: 64238, Start Num: 14

Candidate Starts for Gage\_114:

(Start: 14 @63759 has 76 MA's), (18, 63837), (22, 63861), (23, 63864), (29, 64008), (32, 64029), (39, 64155), (42, 64203), (44, 64233),

Gene: Gaia\_127 Start: 69941, Stop: 70507, Start Num: 3

Candidate Starts for Gaia\_127:

(Start: 3 @69941 has 2 MA's), (10, 70043), (11, 70055), (18, 70157), (19, 70160), (24, 70196), (25, 70232), (27, 70316), (28, 70325), (29, 70328), (31, 70346), (32, 70349), (33, 70352), (36, 70421), (37, 70430), (38, 70454), (39, 70475),

Gene: Gemini\_117 Start: 64138, Stop: 64617, Start Num: 14

Candidate Starts for Gemini\_117:

(Start: 14 @64138 has 76 MA's), (18, 64216), (22, 64240), (23, 64243), (29, 64387), (32, 64408), (39, 64534), (42, 64582), (44, 64612),

Gene: GoldenSpark\_116 Start: 63621, Stop: 64100, Start Num: 14

Candidate Starts for GoldenSpark\_116:

(Start: 14 @63621 has 76 MA's), (18, 63699), (22, 63723), (23, 63726), (29, 63870), (32, 63891), (39, 64017), (42, 64065), (44, 64095),

Gene: Gonephishing\_159 Start: 86073, Stop: 86573, Start Num: 8

Candidate Starts for Gonephishing\_159:

(Start: 8 @86073 has 3 MA's), (16, 86199), (18, 86226), (21, 86244), (22, 86250), (26, 86331), (27, 86385), (30, 86406), (34, 86424), (36, 86490), (39, 86544),

Gene: GooberAzure\_115 Start: 63621, Stop: 64100, Start Num: 14

Candidate Starts for GooberAzure\_115:

(Start: 14 @63621 has 76 MA's), (18, 63699), (22, 63723), (23, 63726), (29, 63870), (32, 63891), (39, 64017), (42, 64065), (44, 64095),

Gene: Greep\_116 Start: 65193, Stop: 65672, Start Num: 14

Candidate Starts for Greep\_116:

(Start: 14 @65193 has 76 MA's), (18, 65271), (22, 65295), (23, 65298), (29, 65442), (32, 65463), (39, 65589), (42, 65637), (44, 65667),

Gene: Halley\_166 Start: 87496, Stop: 87981, Start Num: 9

Candidate Starts for Halley\_166:

(6, 87463), (Start: 9 @87496 has 27 MA's), (16, 87598), (20, 87637), (21, 87643), (22, 87649), (23, 87652), (29, 87796), (35, 87853), (40, 87964),

Gene: HanKaySha\_112 Start: 63809, Stop: 64288, Start Num: 14

Candidate Starts for HanKaySha\_112:

(Start: 14 @63809 has 76 MA's), (18, 63887), (22, 63911), (23, 63914), (29, 64058), (32, 64079), (39, 64205), (42, 64253), (44, 64283),

Gene: Hannaconda\_158 Start: 87994, Stop: 88494, Start Num: 8

Candidate Starts for Hannaconda\_158:

(Start: 8 @87994 has 3 MA's), (16, 88120), (18, 88147), (21, 88165), (22, 88171), (26, 88252), (27, 88306), (30, 88327), (34, 88345), (36, 88411), (39, 88465),

Gene: Hidrated\_158 Start: 89219, Stop: 89695, Start Num: 9

Candidate Starts for Hidrated\_158:

(6, 89186), (Start: 9 @89219 has 27 MA's), (15, 89306), (18, 89348), (26, 89453), (27, 89507), (30, 89528), (36, 89612), (39, 89666),

Gene: Highbury\_108 Start: 61966, Stop: 62445, Start Num: 14

Candidate Starts for Highbury\_108:

(Start: 14 @61966 has 76 MA's), (18, 62044), (22, 62068), (23, 62071), (29, 62215), (32, 62236), (39, 62362), (42, 62410), (44, 62440),

Gene: HokkenD\_160 Start: 89277, Stop: 89762, Start Num: 9

Candidate Starts for HokkenD\_160:

(6, 89244), (Start: 9 @89277 has 27 MA's), (16, 89379), (20, 89418), (21, 89424), (22, 89430), (23, 89433), (29, 89577), (35, 89634), (40, 89745),

Gene: Hoonter\_115 Start: 64114, Stop: 64593, Start Num: 14

Candidate Starts for Hoonter\_115:

(Start: 14 @64114 has 76 MA's), (18, 64192), (22, 64216), (23, 64219), (29, 64363), (32, 64384), (39, 64510), (42, 64558), (44, 64588),

Gene: Hopecy\_112 Start: 64420, Stop: 64899, Start Num: 14

Candidate Starts for Hopecy\_112:

(Start: 14 @64420 has 76 MA's), (18, 64498), (22, 64522), (23, 64525), (29, 64669), (32, 64690), (39, 64816), (42, 64864), (44, 64894),

Gene: HufflyPuff\_114 Start: 64729, Stop: 65208, Start Num: 14

Candidate Starts for HufflyPuff\_114:

(Start: 14 @64729 has 76 MA's), (18, 64807), (22, 64831), (23, 64834), (29, 64978), (32, 64999), (39, 65125), (42, 65173), (44, 65203),

Gene: Hughesyang\_164 Start: 87978, Stop: 88463, Start Num: 9

Candidate Starts for Hughesyang\_164:

(6, 87945), (Start: 9 @87978 has 27 MA's), (16, 88080), (20, 88119), (21, 88125), (22, 88131), (23, 88134), (29, 88278), (35, 88335), (40, 88446),

Gene: JuicyJay\_160 Start: 88924, Stop: 89409, Start Num: 9

Candidate Starts for JuicyJay\_160:

(6, 88891), (Start: 9 @88924 has 27 MA's), (16, 89026), (20, 89065), (21, 89071), (22, 89077), (23, 89080), (29, 89224), (35, 89281), (40, 89392),

Gene: Kalah2\_162 Start: 89262, Stop: 89747, Start Num: 9

Candidate Starts for Kalah2\_162:

(6, 89229), (Start: 9 @89262 has 27 MA's), (16, 89364), (20, 89403), (21, 89409), (22, 89415), (23, 89418), (29, 89562), (35, 89619), (40, 89730),

Gene: Kanye\_109 Start: 63870, Stop: 64349, Start Num: 14

Candidate Starts for Kanye\_109:

(Start: 14 @63870 has 76 MA's), (18, 63948), (22, 63972), (23, 63975), (29, 64119), (32, 64140), (39, 64266), (42, 64314), (44, 64344),

Gene: KashFlow\_163 Start: 87807, Stop: 88307, Start Num: 8

Candidate Starts for KashFlow\_163:

(Start: 8 @87807 has 3 MA's), (16, 87933), (18, 87960), (21, 87978), (22, 87984), (26, 88065), (27, 88119), (30, 88140), (34, 88158), (36, 88224), (39, 88278),

Gene: Klein\_169 Start: 87601, Stop: 88086, Start Num: 9

Candidate Starts for Klein\_169:

(6, 87568), (Start: 9 @87601 has 27 MA's), (16, 87703), (20, 87742), (21, 87748), (22, 87754), (23, 87757), (29, 87901), (35, 87958), (40, 88069),

Gene: Lilac\_113 Start: 64563, Stop: 65042, Start Num: 14

Candidate Starts for Lilac\_113:

(Start: 14 @64563 has 76 MA's), (18, 64641), (22, 64665), (23, 64668), (29, 64812), (32, 64833), (39, 64959), (42, 65007), (44, 65037),

Gene: Lilizi\_112 Start: 63849, Stop: 64328, Start Num: 14

Candidate Starts for Lilizi\_112:

(Start: 14 @63849 has 76 MA's), (18, 63927), (22, 63951), (23, 63954), (29, 64098), (32, 64119), (39, 64245), (42, 64293), (44, 64323),

Gene: Lilpickle\_111 Start: 63261, Stop: 63740, Start Num: 14

Candidate Starts for Lilpickle\_111:

(Start: 14 @63261 has 76 MA's), (18, 63339), (22, 63363), (23, 63366), (29, 63510), (32, 63531), (39, 63657), (42, 63705), (44, 63735),

Gene: Liveloughbron\_113 Start: 64862, Stop: 65341, Start Num: 14

Candidate Starts for Liveloughbron\_113:

(Start: 14 @64862 has 76 MA's), (18, 64940), (22, 64964), (23, 64967), (29, 65111), (32, 65132), (39, 65258), (42, 65306), (44, 65336),

Gene: MISSy\_113 Start: 64546, Stop: 65025, Start Num: 14

Candidate Starts for MISSy\_113:

(Start: 14 @64546 has 76 MA's), (18, 64624), (22, 64648), (23, 64651), (29, 64795), (32, 64816), (39, 64942), (42, 64990), (44, 65020),

Gene: MPhalcon\_113 Start: 63964, Stop: 64443, Start Num: 14

Candidate Starts for MPhalcon\_113:

(Start: 14 @63964 has 76 MA's), (18, 64042), (22, 64066), (23, 64069), (29, 64213), (32, 64234), (39, 64360), (42, 64408), (44, 64438),

Gene: MadamMonkfish\_111 Start: 63271, Stop: 63750, Start Num: 14

Candidate Starts for MadamMonkfish\_111:

(Start: 14 @63271 has 76 MA's), (18, 63349), (22, 63373), (23, 63376), (29, 63520), (32, 63541), (39, 63667), (42, 63715), (44, 63745),

Gene: Manda\_113 Start: 64001, Stop: 64480, Start Num: 14

Candidate Starts for Manda\_113:

(Start: 14 @64001 has 76 MA's), (18, 64079), (22, 64103), (23, 64106), (29, 64250), (32, 64271), (39, 64397), (42, 64445), (44, 64475),

Gene: Maxxinista\_114 Start: 63748, Stop: 64227, Start Num: 14

Candidate Starts for Maxxinista\_114:

(Start: 14 @63748 has 76 MA's), (18, 63826), (22, 63850), (23, 63853), (29, 63997), (32, 64018), (39, 64144), (42, 64192), (44, 64222),

Gene: Minerva\_165 Start: 87342, Stop: 87827, Start Num: 9

Candidate Starts for Minerva\_165:

(6, 87309), (Start: 9 @87342 has 27 MA's), (16, 87444), (20, 87483), (21, 87489), (22, 87495), (23, 87498), (29, 87642), (35, 87699), (40, 87810),

Gene: Miniwave\_107 Start: 63457, Stop: 63936, Start Num: 14

Candidate Starts for Miniwave\_107:

(Start: 14 @63457 has 76 MA's), (18, 63535), (22, 63559), (23, 63562), (29, 63706), (32, 63727), (39, 63853), (42, 63901), (44, 63931),

Gene: Misfit\_113 Start: 65060, Stop: 65539, Start Num: 14

Candidate Starts for Misfit\_113:

(Start: 14 @65060 has 76 MA's), (18, 65138), (22, 65162), (23, 65165), (29, 65309), (32, 65330), (39, 65456), (42, 65504), (44, 65534),

Gene: Moldemort\_114 Start: 63729, Stop: 64208, Start Num: 14

Candidate Starts for Moldemort\_114:

(Start: 14 @63729 has 76 MA's), (18, 63807), (22, 63831), (23, 63834), (29, 63978), (32, 63999), (39, 64125), (42, 64173), (44, 64203),

Gene: MollyToe\_106 Start: 61837, Stop: 62316, Start Num: 14

Candidate Starts for MollyToe\_106:

(Start: 14 @61837 has 76 MA's), (18, 61915), (22, 61939), (23, 61942), (29, 62086), (32, 62107), (39, 62233), (42, 62281), (44, 62311),

Gene: Mosby\_109 Start: 63424, Stop: 63903, Start Num: 14

Candidate Starts for Mosby\_109:

(Start: 14 @63424 has 76 MA's), (18, 63502), (22, 63526), (23, 63529), (29, 63673), (32, 63694), (39, 63820), (42, 63868), (44, 63898),

Gene: Murica\_116 Start: 65763, Stop: 66242, Start Num: 14

Candidate Starts for Murica\_116:

(Start: 14 @65763 has 76 MA's), (18, 65841), (22, 65865), (23, 65868), (29, 66012), (32, 66033), (39, 66159), (42, 66207), (44, 66237),

Gene: Murphy\_111 Start: 64121, Stop: 64600, Start Num: 14

Candidate Starts for Murphy\_111:

(Start: 14 @64121 has 76 MA's), (18, 64199), (22, 64223), (23, 64226), (29, 64370), (32, 64391), (39, 64517), (42, 64565), (44, 64595),

Gene: Nala\_114 Start: 64473, Stop: 64952, Start Num: 14

Candidate Starts for Nala\_114:

(Start: 14 @64473 has 76 MA's), (18, 64551), (22, 64575), (23, 64578), (29, 64722), (32, 64743), (39, 64869), (42, 64917), (44, 64947),

Gene: Nebkiss\_128 Start: 68867, Stop: 69433, Start Num: 3

Candidate Starts for Nebkiss\_128:

(Start: 3 @68867 has 2 MA's), (10, 68969), (11, 68981), (18, 69083), (19, 69086), (24, 69122), (25, 69158), (27, 69242), (28, 69251), (29, 69254), (31, 69272), (32, 69275), (33, 69278), (36, 69347), (37, 69356), (38, 69380), (39, 69401),

Gene: NelitzaMV\_109 Start: 62446, Stop: 62925, Start Num: 14

Candidate Starts for NelitzaMV\_109:

(Start: 14 @62446 has 76 MA's), (18, 62524), (22, 62548), (23, 62551), (29, 62695), (32, 62716), (39, 62842), (42, 62890), (44, 62920),

Gene: NihilNomen\_167 Start: 87050, Stop: 87535, Start Num: 9

Candidate Starts for NihilNomen\_167:

(6, 87017), (Start: 9 @87050 has 27 MA's), (16, 87152), (20, 87191), (21, 87197), (22, 87203), (23, 87206), (29, 87350), (35, 87407), (40, 87518),

Gene: NoSleep\_112 Start: 63281, Stop: 63760, Start Num: 14

Candidate Starts for NoSleep\_112:

(Start: 14 @63281 has 76 MA's), (18, 63359), (22, 63383), (23, 63386), (29, 63530), (32, 63551), (39, 63677), (42, 63725), (44, 63755),

Gene: NonchalantPear\_112 Start: 62714, Stop: 63193, Start Num: 14

Candidate Starts for NonchalantPear\_112:

(Start: 14 @62714 has 76 MA's), (18, 62792), (22, 62816), (23, 62819), (29, 62963), (32, 62984), (39, 63110), (42, 63158), (44, 63188),

Gene: Odette\_169 Start: 89731, Stop: 90216, Start Num: 9

Candidate Starts for Odette\_169:

(6, 89698), (Start: 9 @89731 has 27 MA's), (16, 89833), (20, 89872), (21, 89878), (22, 89884), (23, 89887), (29, 90031), (35, 90088), (40, 90199),

Gene: Omega\_174 Start: 89801, Stop: 90301, Start Num: 8

Candidate Starts for Omega\_174:

(Start: 8 @89801 has 3 MA's), (16, 89927), (18, 89954), (21, 89972), (22, 89978), (26, 90059), (27, 90113), (30, 90134), (34, 90152), (36, 90218), (39, 90272),

Gene: Optimus\_164 Start: 88257, Stop: 88742, Start Num: 9

Candidate Starts for Optimus\_164:

(6, 88224), (Start: 9 @88257 has 27 MA's), (16, 88359), (20, 88398), (21, 88404), (22, 88410), (23, 88413), (29, 88557), (35, 88614), (40, 88725),

Gene: OrionPax\_110 Start: 63354, Stop: 63833, Start Num: 14

Candidate Starts for OrionPax\_110:

(Start: 14 @63354 has 76 MA's), (18, 63432), (22, 63456), (23, 63459), (29, 63603), (32, 63624), (39, 63750), (42, 63798), (44, 63828),

Gene: PaddyBaddy\_111 Start: 63472, Stop: 63951, Start Num: 14

Candidate Starts for PaddyBaddy\_111:

(Start: 14 @63472 has 76 MA's), (18, 63550), (22, 63574), (23, 63577), (29, 63721), (32, 63742), (39, 63868), (42, 63916), (44, 63946),

Gene: Palpatine\_113 Start: 64758, Stop: 65237, Start Num: 14

Candidate Starts for Palpatine\_113:

(Start: 14 @64758 has 76 MA's), (18, 64836), (22, 64860), (23, 64863), (29, 65007), (32, 65028), (39, 65154), (42, 65202), (44, 65232),

Gene: Paperbeatsrock\_111 Start: 64135, Stop: 64614, Start Num: 14

Candidate Starts for Paperbeatsrock\_111:

(Start: 14 @64135 has 76 MA's), (18, 64213), (22, 64237), (23, 64240), (29, 64384), (32, 64405), (39, 64531), (42, 64579), (44, 64609),

Gene: Petra64142\_116 Start: 64603, Stop: 65082, Start Num: 14

Candidate Starts for Petra64142\_116:

(1, 64432), (4, 64474), (Start: 14 @64603 has 76 MA's), (18, 64681), (22, 64705), (23, 64708), (29, 64852), (32, 64873), (39, 64999), (42, 65047), (44, 65077),

Gene: Pharsalus\_109 Start: 63834, Stop: 64313, Start Num: 14

Candidate Starts for Pharsalus\_109:

(Start: 14 @63834 has 76 MA's), (18, 63912), (22, 63936), (23, 63939), (29, 64083), (32, 64104), (39, 64230), (42, 64278), (44, 64308),

Gene: PhatBacter\_115 Start: 64503, Stop: 64982, Start Num: 14

Candidate Starts for PhatBacter\_115:

(Start: 14 @64503 has 76 MA's), (18, 64581), (22, 64605), (23, 64608), (29, 64752), (32, 64773), (39, 64899), (42, 64947), (44, 64977),

Gene: Phaux\_114 Start: 65063, Stop: 65542, Start Num: 14

Candidate Starts for Phaux\_114:

(Start: 14 @65063 has 76 MA's), (18, 65141), (22, 65165), (23, 65168), (29, 65312), (32, 65333), (39, 65459), (42, 65507), (44, 65537),

Gene: Phoebus\_166 Start: 90737, Stop: 91222, Start Num: 9

Candidate Starts for Phoebus\_166:

(6, 90704), (Start: 9 @90737 has 27 MA's), (16, 90839), (20, 90878), (21, 90884), (22, 90890), (23, 90893), (29, 91037), (35, 91094), (40, 91205),

Gene: Phrux\_108 Start: 63141, Stop: 63620, Start Num: 14

Candidate Starts for Phrux\_108:

(Start: 14 @63141 has 76 MA's), (18, 63219), (22, 63243), (23, 63246), (29, 63390), (32, 63411), (39, 63537), (42, 63585), (44, 63615),

Gene: Policronamos\_115 Start: 64767, Stop: 65246, Start Num: 14

Candidate Starts for Policronamos\_115:

(Start: 14 @64767 has 76 MA's), (18, 64845), (22, 64869), (23, 64872), (29, 65016), (32, 65037), (39, 65163), (42, 65211), (44, 65241),

Gene: Pound\_159 Start: 86786, Stop: 87271, Start Num: 9

Candidate Starts for Pound\_159:

(6, 86753), (Start: 9 @86786 has 27 MA's), (16, 86888), (20, 86927), (21, 86933), (22, 86939), (23, 86942), (29, 87086), (35, 87143), (40, 87254),

Gene: Ptowny\_108 Start: 62175, Stop: 62654, Start Num: 14

Candidate Starts for Ptowny\_108:

(Start: 14 @62175 has 76 MA's), (18, 62253), (22, 62277), (23, 62280), (29, 62424), (32, 62445), (39, 62571), (42, 62619), (44, 62649),

Gene: Pumpkin\_113 Start: 63481, Stop: 63960, Start Num: 14

Candidate Starts for Pumpkin\_113:

(Start: 14 @63481 has 76 MA's), (18, 63559), (22, 63583), (23, 63586), (29, 63730), (32, 63751), (39, 63877), (42, 63925), (44, 63955),

Gene: Quallification\_113 Start: 64549, Stop: 65028, Start Num: 14

Candidate Starts for Quallification\_113:

(Start: 14 @64549 has 76 MA's), (18, 64627), (22, 64651), (23, 64654), (29, 64798), (32, 64819), (39, 64945), (42, 64993), (44, 65023),

Gene: Rearden\_165 Start: 85776, Stop: 86276, Start Num: 8

Candidate Starts for Rearden\_165:

(Start: 8 @85776 has 3 MA's), (16, 85902), (18, 85929), (21, 85947), (22, 85953), (26, 86034), (27, 86088), (30, 86109), (34, 86127), (36, 86193), (39, 86247),

Gene: Redno2\_159 Start: 84850, Stop: 85335, Start Num: 9

Candidate Starts for Redno2\_159:

(6, 84817), (Start: 9 @84850 has 27 MA's), (16, 84952), (20, 84991), (21, 84997), (22, 85003), (23, 85006), (29, 85150), (35, 85207), (40, 85318),

Gene: Rimmer\_110 Start: 63940, Stop: 64419, Start Num: 14

Candidate Starts for Rimmer\_110:

(Start: 14 @63940 has 76 MA's), (18, 64018), (22, 64042), (23, 64045), (29, 64189), (32, 64210), (39, 64336), (42, 64384), (44, 64414),

Gene: RiverMonster\_111 Start: 64036, Stop: 64515, Start Num: 14

Candidate Starts for RiverMonster\_111:

(Start: 14 @64036 has 76 MA's), (18, 64114), (22, 64138), (23, 64141), (29, 64285), (32, 64306), (39, 64432), (42, 64480), (44, 64510),

Gene: Saints25\_108 Start: 61966, Stop: 62445, Start Num: 14

Candidate Starts for Saints25\_108:

(Start: 14 @61966 has 76 MA's), (18, 62044), (22, 62068), (23, 62071), (29, 62215), (32, 62236), (39, 62362), (42, 62410), (44, 62440),

Gene: Sassay\_107 Start: 62386, Stop: 62865, Start Num: 14

Candidate Starts for Sassay\_107:

(Start: 14 @62386 has 76 MA's), (18, 62464), (22, 62488), (23, 62491), (29, 62635), (32, 62656), (39, 62782), (42, 62830), (44, 62860),

Gene: Schatzie\_160 Start: 87785, Stop: 88270, Start Num: 9

Candidate Starts for Schatzie\_160:

(6, 87752), (Start: 9 @87785 has 27 MA's), (16, 87887), (20, 87926), (21, 87932), (22, 87938), (23, 87941), (29, 88085), (35, 88142), (40, 88253),

Gene: ShereKhan\_110 Start: 64795, Stop: 65274, Start Num: 14

Candidate Starts for ShereKhan\_110:

(Start: 14 @64795 has 76 MA's), (18, 64873), (22, 64897), (23, 64900), (29, 65044), (32, 65065), (39, 65191), (42, 65239), (44, 65269),

Gene: Simpliphy\_110 Start: 63607, Stop: 64086, Start Num: 14

Candidate Starts for Simpliphy\_110:

(Start: 14 @63607 has 76 MA's), (18, 63685), (22, 63709), (23, 63712), (29, 63856), (32, 63877), (39, 64003), (42, 64051), (44, 64081),

Gene: Stark\_112 Start: 63920, Stop: 64399, Start Num: 14

Candidate Starts for Stark\_112:

(Start: 14 @63920 has 76 MA's), (18, 63998), (22, 64022), (23, 64025), (29, 64169), (32, 64190), (39, 64316), (42, 64364), (44, 64394),

Gene: StellaBean\_110 Start: 64217, Stop: 64696, Start Num: 14

Candidate Starts for StellaBean\_110:

(Start: 14 @64217 has 76 MA's), (18, 64295), (22, 64319), (23, 64322), (29, 64466), (32, 64487), (39, 64613), (42, 64661), (44, 64691),

Gene: StolenFromERC\_114 Start: 63759, Stop: 64238, Start Num: 14

Candidate Starts for StolenFromERC\_114:

(Start: 14 @63759 has 76 MA's), (18, 63837), (22, 63861), (23, 63864), (29, 64008), (32, 64029), (39, 64155), (42, 64203), (44, 64233),

Gene: Tarkin\_111 Start: 64660, Stop: 65139, Start Num: 14

Candidate Starts for Tarkin\_111:

(Start: 14 @64660 has 76 MA's), (18, 64738), (22, 64762), (23, 64765), (29, 64909), (32, 64930), (39, 65056), (42, 65104), (44, 65134),

Gene: TeamEdward\_112 Start: 64301, Stop: 64780, Start Num: 14

Candidate Starts for TeamEdward\_112:

(Start: 14 @64301 has 76 MA's), (18, 64379), (22, 64403), (23, 64406), (29, 64550), (32, 64571), (39, 64697), (42, 64745), (44, 64775),

Gene: Terminus\_115 Start: 65060, Stop: 65539, Start Num: 14

Candidate Starts for Terminus\_115:

(Start: 14 @65060 has 76 MA's), (18, 65138), (22, 65162), (23, 65165), (29, 65309), (32, 65330), (39, 65456), (42, 65504), (44, 65534),

Gene: Thimble\_114 Start: 63021, Stop: 63500, Start Num: 14

Candidate Starts for Thimble\_114:

(Start: 14 @63021 has 76 MA's), (18, 63099), (22, 63123), (23, 63126), (29, 63270), (32, 63291), (39, 63417), (42, 63465), (44, 63495),

Gene: ThreeRngTarjay\_162 Start: 88659, Stop: 89144, Start Num: 9

Candidate Starts for ThreeRngTarjay\_162:

(6, 88626), (Start: 9 @88659 has 27 MA's), (16, 88761), (20, 88800), (21, 88806), (22, 88812), (23, 88815), (29, 88959), (35, 89016), (40, 89127),

Gene: Thresher\_113 Start: 64700, Stop: 65179, Start Num: 14

Candidate Starts for Thresher\_113:

(Start: 14 @64700 has 76 MA's), (18, 64778), (22, 64802), (23, 64805), (29, 64949), (32, 64970), (39, 65096), (42, 65144), (44, 65174),

Gene: Tomaszewski\_107 Start: 63598, Stop: 64077, Start Num: 14

Candidate Starts for Tomaszewski\_107:

(Start: 14 @63598 has 76 MA's), (18, 63676), (22, 63700), (23, 63703), (29, 63847), (32, 63868), (39, 63994), (42, 64042), (44, 64072),

Gene: Ukulele\_107 Start: 63417, Stop: 63896, Start Num: 14

Candidate Starts for Ukulele\_107:

(Start: 14 @63417 has 76 MA's), (18, 63495), (22, 63519), (23, 63522), (29, 63666), (32, 63687), (39, 63813), (42, 63861), (44, 63891),

Gene: Wanda\_163 Start: 85250, Stop: 85735, Start Num: 9

Candidate Starts for Wanda\_163:

(6, 85217), (Start: 9 @85250 has 27 MA's), (16, 85352), (20, 85391), (21, 85397), (22, 85403), (23, 85406), (29, 85550), (35, 85607), (40, 85718),

Gene: Willez\_107 Start: 62386, Stop: 62865, Start Num: 14

Candidate Starts for Willez\_107:

(Start: 14 @62386 has 76 MA's), (18, 62464), (22, 62488), (23, 62491), (29, 62635), (32, 62656), (39, 62782), (42, 62830), (44, 62860),

Gene: Xiaokay\_161 Start: 88667, Stop: 89170, Start Num: 9

Candidate Starts for Xiaokay\_161:

(6, 88634), (Start: 9 @88667 has 27 MA's), (16, 88787), (19, 88817), (20, 88826), (21, 88832), (22, 88838), (23, 88841), (29, 88985), (35, 89042), (40, 89153),

Gene: YassJohnny\_109 Start: 62407, Stop: 62886, Start Num: 14

Candidate Starts for YassJohnny\_109:

(Start: 14 @62407 has 76 MA's), (18, 62485), (22, 62509), (23, 62512), (29, 62656), (32, 62677), (39, 62803), (42, 62851), (44, 62881),

Gene: Yeet\_157 Start: 86638, Stop: 87123, Start Num: 9

Candidate Starts for Yeet\_157:

(6, 86605), (Start: 9 @86638 has 27 MA's), (16, 86740), (20, 86779), (21, 86785), (22, 86791), (23, 86794), (29, 86938), (35, 86995), (40, 87106),

Gene: Youngblood\_116 Start: 64556, Stop: 65035, Start Num: 14

Candidate Starts for Youngblood\_116:

(Start: 14 @64556 has 76 MA's), (18, 64634), (22, 64658), (23, 64661), (29, 64805), (32, 64826), (39, 64952), (42, 65000), (44, 65030),

Gene: Zelink\_158 Start: 86973, Stop: 87458, Start Num: 9

Candidate Starts for Zelink\_158:

(6, 86940), (Start: 9 @86973 has 27 MA's), (16, 87075), (20, 87114), (21, 87120), (22, 87126), (23, 87129), (29, 87273), (35, 87330), (40, 87441),

Gene: xkcd\_116 Start: 64741, Stop: 65220, Start Num: 14

Candidate Starts for xkcd\_116:

(Start: 14 @64741 has 76 MA's), (18, 64819), (22, 64843), (23, 64846), (29, 64990), (32, 65011), (39, 65137), (42, 65185), (44, 65215),