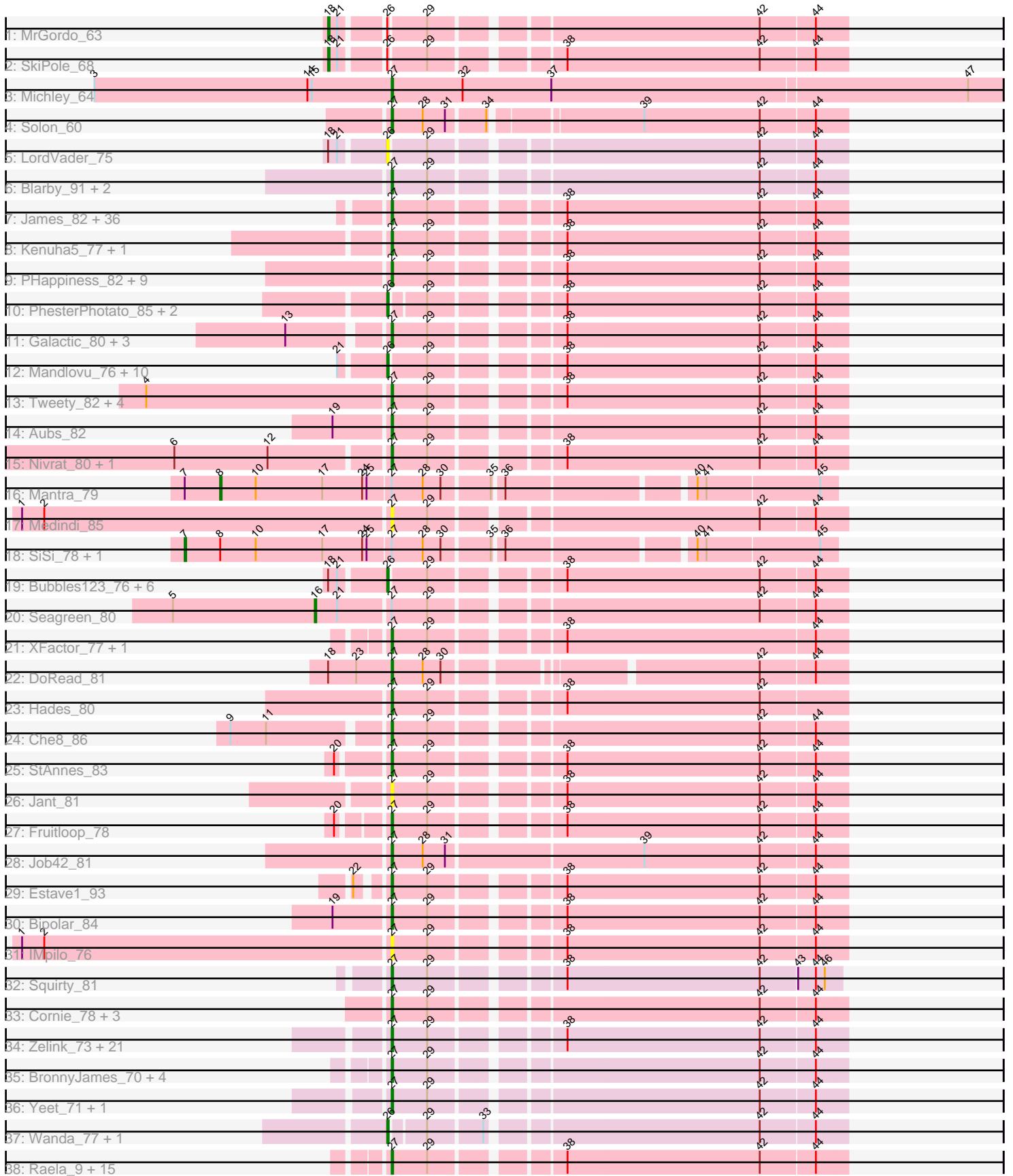


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Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. 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 311309 Report

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

Pham number 311309 has 159 members, 18 are drafts.

Phages represented in each track:

- Track 1 : MrGordo\_63
- Track 2 : SkiPole\_68
- Track 3 : Michley\_64
- Track 4 : Solon\_60
- Track 5 : LordVader\_75
- Track 6 : Blarby\_91, Jabbawokkie\_91, Zapner\_90
- Track 7 : James\_82, Boomer\_85, Mozy\_88, LunaBlu\_84, Ms6\_82, Flathead\_81, SG4\_81, Burwell21\_76, Lij\_77, Clifton\_74, Lorde\_81, OlympiaSaint\_81, Lucia\_80, Enby\_82, Eish\_84, KristaRAM\_79, DirtMcgirt\_80, Rockne\_82, Harley\_80, Jarcob\_81, UncleRicky\_80, Drago\_78, Latretium\_82, Enzomatic\_90, NewHope4\_84, Polo2Bam\_89, Philus\_84, SeaLumen\_86, DRBy19\_85, Violac\_83, Ogotogo\_87, Rita\_88, Marker\_87, PMC\_78, Avani\_90, Phatniss\_78, Mova\_80
- Track 8 : Kenuha5\_77, Gandolph\_79
- Track 9 : PHappiness\_82, OldBen\_79, Nimbo\_74, RitaG\_82, Geralt\_75, MilleniumForce\_82, JoeyJr\_82, Leperchaun\_80, Daenerys\_81, Deb65\_75
- Track 10 : PhesterPhotato\_85, Omega\_79, LittleE\_77
- Track 11 : Galactic\_80, MadMen\_87, Kumao\_59, Nibley\_65
- Track 12 : Mandlovu\_76, VRedHorse\_86, PopTart\_73, Brookers\_76, Coco12\_78, Sarma624\_80, Cerasum\_75, BigPhil\_74, SassyB\_73, Hlubikazi\_76, Strokeseat\_76
- Track 13 : Tweety\_82, Taj\_88, Wee\_87, DeadP\_82, Donkeykong\_86
- Track 14 : Aubs\_82
- Track 15 : Nivrat\_80, LilMoolah\_82
- Track 16 : Mantra\_79
- Track 17 : Medindi\_85
- Track 18 : SiSi\_78, Veteran\_74
- Track 19 : Bubbles123\_76, Minnie\_77, Soul22\_82, IrishSherpFalk\_81, Pepe\_59, Sandalphon\_75, WillSterrel\_80
- Track 20 : Seagreen\_80
- Track 21 : XFactor\_77, DLane\_83
- Track 22 : DoRead\_81
- Track 23 : Hades\_80
- Track 24 : Che8\_86
- Track 25 : StAnnes\_83
- Track 26 : Jant\_81
- Track 27 : Fruitloop\_78
- Track 28 : Job42\_81
- Track 29 : Estave1\_93

- Track 30 : Bipolar\_84
- Track 31 : IMpilo\_76
- Track 32 : Squirty\_81
- Track 33 : Cornie\_78, CaptainTrips\_81, MinionDave\_77, Rearden\_68
- Track 34 : Zelink\_73, Superphikiman\_73, Bagrid\_74, Kalah2\_70, EricMillard\_74, Ejimix\_75, DmpstrDiver\_75, Squint\_76, Beem\_75, JuicyJay\_74, NihilNomen\_76, Phoebus\_78, Dallas\_74, Odette\_74, Ariel\_75, HokkenD\_68, Porcelain\_75, ThreeRngTarjay\_73, MiaZeal\_76, Halley\_77, Schatzie\_70, Hughesyang\_74
- Track 35 : BronnyJames\_70, Phalconet\_78, Kingsley\_85, Shaboozey\_69, Hannaconda\_70
- Track 36 : Yeet\_71, Courthouse\_72
- Track 37 : Wanda\_77, Klein\_73
- Track 38 : Raela\_9, Blackbeetle\_9, Batiatus\_81, Poise\_9, Okabe\_77, DotProduct\_76, Tesla\_9, Ardmore\_67, Hamulus\_80, Filuzino\_82, Akhila\_78, Nekros\_72, Phanphagia\_80, MilanaBonita\_77, Manda\_43, Shauna1\_81

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

The start number called the most often in the published annotations is 27, it was called in 112 of the 141 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Akhila\_78, Ardmore\_67, Ariel\_75, Aubs\_82, Avani\_90, Bagrid\_74, Batiatus\_81, Beem\_75, Bipolar\_84, Blackbeetle\_9, Blarby\_91, Boomer\_85, BronnyJames\_70, Burwell21\_76, CaptainTrips\_81, Che8\_86, Clifton\_74, Cornie\_78, Courthouse\_72, DLane\_83, DRBy19\_85, Daenerys\_81, Dallas\_74, DeadP\_82, Deb65\_75, DirtMcgirt\_80, DmpstrDiver\_75, DoRead\_81, Donkeykong\_86, DotProduct\_76, Drago\_78, Eish\_84, Ejimix\_75, Enby\_82, Enzomatic\_90, EricMillard\_74, Estave1\_93, Filuzino\_82, Flathead\_81, Fruitloop\_78, Galactic\_80, Gandolph\_79, Geralt\_75, Hades\_80, Halley\_77, Hamulus\_80, Hannaconda\_70, Harley\_80, HokkenD\_68, Hughesyang\_74, IMpilo\_76, Jabbawokkie\_91, James\_82, Jant\_81, Jarcob\_81, Job42\_81, JoeyJr\_82, JuicyJay\_74, Kalah2\_70, Kenuha5\_77, Kingsley\_85, KristaRAM\_79, Kumao\_59, Latretium\_82, Leperchaun\_80, LilMoolah\_82, Llij\_77, Lorde\_81, Lucia\_80, LunaBlu\_84, MadMen\_87, Manda\_43, Marker\_87, Medindi\_85, MiaZeal\_76, Michley\_64, MilanaBonita\_77, MilleniumForce\_82, MinionDave\_77, Mova\_80, Mozy\_88, Ms6\_82, Nekros\_72, NewHope4\_84, Nibley\_65, NihilNomen\_76, Nimbo\_74, Nivrat\_80, Odette\_74, Ogopogo\_87, Okabe\_77, OldBen\_79, OlympiaSaint\_81, PHappiness\_82, PMC\_78, Phalconet\_78, Phanphagia\_80, Phatniss\_78, Philus\_84, Phoebus\_78, Poise\_9, Polo2Bam\_89, Porcelain\_75, Raela\_9, Rearden\_68, RitaG\_82, Rita\_88, Rockne\_82, SG4\_81, Schatzie\_70, SeaLumen\_86, Shaboozey\_69, Shauna1\_81, Solon\_60, Squint\_76, Squirty\_81, StAnnes\_83, Superphikiman\_73, Taj\_88, Tesla\_9, ThreeRngTarjay\_73, Tweety\_82, UncleRicky\_80, Violac\_83, Wee\_87, XFactor\_77, Yeet\_71, Zapner\_90, Zelink\_73,

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

- Mantra\_79, Seagreen\_80, SiSi\_78, Veteran\_74,

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

- BigPhil\_74, Brookers\_76, Bubbles123\_76, Cerasum\_75, Coco12\_78, Hlubikazi\_76, IrishSherpFalk\_81, Klein\_73, LittleE\_77, LordVader\_75, Mandlovu\_76, Minnie\_77, MrGordo\_63, Omega\_79, Pepe\_59, PhesterPhotato\_85, PopTart\_73, Sandalphon\_75, Sarma624\_80, SassyB\_73, SkiPole\_68, Soul22\_82, Strokeseat\_76, VRedHorse\_86, Wanda\_77, WillSterrel\_80,

### Summary by start number:

#### Start 7:

- Found in 3 of 159 ( 1.9% ) of genes in pham
- Manual Annotations of this start: 2 of 141
- Called 66.7% of time when present
- Phage (with cluster) where this start called: SiSi\_78 (F1), Veteran\_74 (F1),

#### Start 8:

- Found in 3 of 159 ( 1.9% ) of genes in pham
- Manual Annotations of this start: 1 of 141
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Mantra\_79 (F1),

#### Start 16:

- Found in 1 of 159 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 1 of 141
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Seagreen\_80 (F1),

#### Start 18:

- Found in 11 of 159 ( 6.9% ) of genes in pham
- Manual Annotations of this start: 2 of 141
- Called 18.2% of time when present
- Phage (with cluster) where this start called: MrGordo\_63 (A1), SkiPole\_68 (A1),

#### Start 26:

- Found in 26 of 159 ( 16.4% ) of genes in pham
- Manual Annotations of this start: 23 of 141
- Called 92.3% of time when present
- Phage (with cluster) where this start called: BigPhil\_74 (F1), Brookers\_76 (F1), Bubbles123\_76 (F1), Cerasum\_75 (F1), Coco12\_78 (F1), Hlubikazi\_76 (F1), IrishSherpFalk\_81 (F1), Klein\_73 (J), LittleE\_77 (J), LordVader\_75 (F), Mandlovu\_76 (F1), Minnie\_77 (F1), Omega\_79 (J), Pepe\_59 (A1), PhesterPhotato\_85 (F1), PopTart\_73 (F1), Sandalphon\_75 (F1), Sarma624\_80 (F1), SassyB\_73 (F1), Soul22\_82 (F2), Strokeseat\_76 (F1), VRedHorse\_86 (F1), Wanda\_77 (J), WillSterrel\_80 (F1),

#### Start 27:

- Found in 133 of 159 ( 83.6% ) of genes in pham
- Manual Annotations of this start: 112 of 141
- Called 97.0% of time when present
- Phage (with cluster) where this start called: Akhila\_78 (F1), Ardmore\_67 (F1), Ariel\_75 (J), Aubs\_82 (F1), Avani\_90 (F2), Bagrid\_74 (J), Batiatus\_81 (F1), Beem\_75 (J), Bipolar\_84 (F1), Blackbeetle\_9 (S), Blarby\_91 (F), Boomer\_85 (F1), BronnyJames\_70 (J), Burwell21\_76 (F1), CaptainTrips\_81 (F1), Che8\_86 (F1), Clifton\_74 (F1), Cornie\_78 (F5), Courthouse\_72 (J), DLane\_83 (F1), DRBy19\_85

(F1), Daenerys\_81 (F1), Dallas\_74 (J), DeadP\_82 (F1), Deb65\_75 (F1), DirtMcgirt\_80 (F1), DmpstrDiver\_75 (J), DoRead\_81 (F1), Donkeykong\_86 (F1), DotProduct\_76 (F1), Drago\_78 (F1), Eish\_84 (F1), Ejimix\_75 (J), Enby\_82 (F1), Enzomatic\_90 (F1), EricMillard\_74 (J), Estave1\_93 (F1), Filuzino\_82 (F1), Flathead\_81 (F1), Fruitloop\_78 (F1), Galactic\_80 (F1), Gandolph\_79 (F1), Geralt\_75 (F1), Hades\_80 (F1), Halley\_77 (J), Hamulus\_80 (F1), Hannaconda\_70 (J), Harley\_80 (F1), HokkenD\_68 (J), Hughesyang\_74 (J), IMpilo\_76 (F1), Jabbawokkie\_91 (F2), James\_82 (F1), Jant\_81 (F1), Jarcob\_81 (F1), Job42\_81 (F1), JoeyJr\_82 (F1), JuicyJay\_74 (J), Kalah2\_70 (J), Kenuha5\_77 (F1), Kingsley\_85 (F1), KristaRAM\_79 (F1), Kumao\_59 (singleton), Latretium\_82 (F1), Leperchaun\_80 (F1), LilMoolah\_82 (F1), Llij\_77 (F1), Lorde\_81 (F1), Lucia\_80 (F1), LunaBlu\_84 (F1), MadMen\_87 (F1), Manda\_43 (E), Marker\_87 (F1), Medindi\_85 (F1), MiaZeal\_76 (J), Michley\_64 (A1), MilanaBonita\_77 (F1), MilleniumForce\_82 (F1), MinionDave\_77 (F1), Mova\_80 (F1), Mozy\_88 (F1), Ms6\_82 (F1), Nekros\_72 (J), NewHope4\_84 (F1), Nibley\_65 (J), NihilNomen\_76 (J), Nimbo\_74 (F1), Nivrat\_80 (F1), Odette\_74 (J), Ogopogo\_87 (F1), Okabe\_77 (F8), OldBen\_79 (F1), OlympiaSaint\_81 (F1), PHappiness\_82 (F1), PMC\_78 (F1), Phalconet\_78 (F1), Phanphagia\_80 (F1), Phatniss\_78 (F1), Philus\_84 (F1), Phoebus\_78 (J), Poise\_9 (S), Polo2Bam\_89 (F1), Porcelain\_75 (J), Raela\_9 (S), Rearden\_68 (J), RitaG\_82 (F1), Rita\_88 (F1), Rockne\_82 (F1), SG4\_81 (F1), Schatzie\_70 (J), SeaLumen\_86 (F1), Shaboozey\_69 (J), Shauna1\_81 (F1), Solon\_60 (A1), Squint\_76 (J), Squirty\_81 (F3), StAnnes\_83 (F1), Superphikiman\_73 (J), Taj\_88 (F1), Tesla\_9 (S), ThreeRngTarjay\_73 (J), Tweety\_82 (F1), UncleRicky\_80 (F1), Violac\_83 (F1), Wee\_87 (F1), XFactor\_77 (F1), Yeet\_71 (J), Zapner\_90 (F2), Zelink\_73 (J),

### Summary by clusters:

There are 11 clusters represented in this pham: F1, singleton, F3, E, F5, F, F8, J, F2, A1, S,

Info for manual annotations of cluster A1:

- Start number 18 was manually annotated 2 times for cluster A1.
- Start number 26 was manually annotated 1 time for cluster A1.
- Start number 27 was manually annotated 2 times for cluster A1.

Info for manual annotations of cluster E:

- Start number 27 was manually annotated 1 time for cluster E.

Info for manual annotations of cluster F1:

- Start number 7 was manually annotated 2 times for cluster F1.
- Start number 8 was manually annotated 1 time for cluster F1.
- Start number 16 was manually annotated 1 time for cluster F1.
- Start number 26 was manually annotated 17 times for cluster F1.
- Start number 27 was manually annotated 76 times for cluster F1.

Info for manual annotations of cluster F2:

- Start number 26 was manually annotated 1 time for cluster F2.
- Start number 27 was manually annotated 3 times for cluster F2.

Info for manual annotations of cluster F3:

- Start number 27 was manually annotated 1 time for cluster F3.

Info for manual annotations of cluster F5:

- Start number 27 was manually annotated 1 time for cluster F5.

Info for manual annotations of cluster J:

- Start number 26 was manually annotated 4 times for cluster J.
- Start number 27 was manually annotated 23 times for cluster J.

Info for manual annotations of cluster S:

- Start number 27 was manually annotated 4 times for cluster S.

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

Gene: Akhila\_78 Start: 48008, Stop: 48292, Start Num: 27

Candidate Starts for Akhila\_78:

(Start: 27 @48008 has 112 MA's), (29, 48032), (38, 48107), (42, 48236), (44, 48272),

Gene: Ardmore\_67 Start: 43684, Stop: 43968, Start Num: 27

Candidate Starts for Ardmore\_67:

(Start: 27 @43684 has 112 MA's), (29, 43708), (38, 43783), (42, 43912), (44, 43948),

Gene: Ariel\_75 Start: 47349, Stop: 47065, Start Num: 27

Candidate Starts for Ariel\_75:

(Start: 27 @47349 has 112 MA's), (29, 47325), (38, 47250), (42, 47121), (44, 47085),

Gene: Aubs\_82 Start: 49731, Stop: 50015, Start Num: 27

Candidate Starts for Aubs\_82:

(19, 49695), (Start: 27 @49731 has 112 MA's), (29, 49755), (42, 49959), (44, 49995),

Gene: Avani\_90 Start: 47333, Stop: 47617, Start Num: 27

Candidate Starts for Avani\_90:

(Start: 27 @47333 has 112 MA's), (29, 47357), (38, 47432), (42, 47561), (44, 47597),

Gene: Bagrid\_74 Start: 50766, Stop: 50482, Start Num: 27

Candidate Starts for Bagrid\_74:

(Start: 27 @50766 has 112 MA's), (29, 50742), (38, 50667), (42, 50538), (44, 50502),

Gene: Batiatus\_81 Start: 49093, Stop: 49377, Start Num: 27

Candidate Starts for Batiatus\_81:

(Start: 27 @49093 has 112 MA's), (29, 49117), (38, 49192), (42, 49321), (44, 49357),

Gene: Beem\_75 Start: 51626, Stop: 51342, Start Num: 27

Candidate Starts for Beem\_75:

(Start: 27 @51626 has 112 MA's), (29, 51602), (38, 51527), (42, 51398), (44, 51362),

Gene: BigPhil\_74 Start: 44927, Stop: 45211, Start Num: 26

Candidate Starts for BigPhil\_74:

(21, 44903), (Start: 26 @44927 has 23 MA's), (29, 44951), (38, 45026), (42, 45155), (44, 45191),

Gene: Bipolar\_84 Start: 50621, Stop: 50905, Start Num: 27

Candidate Starts for Bipolar\_84:

(19, 50585), (Start: 27 @50621 has 112 MA's), (29, 50645), (38, 50720), (42, 50849), (44, 50885),

Gene: Blackbeetle\_9 Start: 2787, Stop: 3071, Start Num: 27

Candidate Starts for Blackbeetle\_9:

(Start: 27 @2787 has 112 MA's), (29, 2811), (38, 2886), (42, 3015), (44, 3051),

Gene: Blarby\_91 Start: 47885, Stop: 48169, Start Num: 27

Candidate Starts for Blarby\_91:

(Start: 27 @47885 has 112 MA's), (29, 47909), (42, 48113), (44, 48149),

Gene: Boomer\_85 Start: 49678, Stop: 49962, Start Num: 27

Candidate Starts for Boomer\_85:

(Start: 27 @49678 has 112 MA's), (29, 49702), (38, 49777), (42, 49906), (44, 49942),

Gene: BronnyJames\_70 Start: 45965, Stop: 45681, Start Num: 27

Candidate Starts for BronnyJames\_70:

(Start: 27 @45965 has 112 MA's), (29, 45941), (42, 45737), (44, 45701),

Gene: Brookers\_76 Start: 47878, Stop: 48162, Start Num: 26

Candidate Starts for Brookers\_76:

(21, 47854), (Start: 26 @47878 has 23 MA's), (29, 47902), (38, 47977), (42, 48106), (44, 48142),

Gene: Bubbles123\_76 Start: 48608, Stop: 48892, Start Num: 26

Candidate Starts for Bubbles123\_76:

(Start: 18 @48578 has 2 MA's), (21, 48584), (Start: 26 @48608 has 23 MA's), (29, 48632), (38, 48707), (42, 48836), (44, 48872),

Gene: Burwell21\_76 Start: 48586, Stop: 48870, Start Num: 27

Candidate Starts for Burwell21\_76:

(Start: 27 @48586 has 112 MA's), (29, 48610), (38, 48685), (42, 48814), (44, 48850),

Gene: CaptainTrips\_81 Start: 48491, Stop: 48775, Start Num: 27

Candidate Starts for CaptainTrips\_81:

(Start: 27 @48491 has 112 MA's), (29, 48515), (42, 48719), (44, 48755),

Gene: Cerasum\_75 Start: 44945, Stop: 45229, Start Num: 26

Candidate Starts for Cerasum\_75:

(21, 44921), (Start: 26 @44945 has 23 MA's), (29, 44969), (38, 45044), (42, 45173), (44, 45209),

Gene: Che8\_86 Start: 49874, Stop: 50158, Start Num: 27

Candidate Starts for Che8\_86:

(9, 49778), (11, 49802), (Start: 27 @49874 has 112 MA's), (29, 49898), (42, 50102), (44, 50138),

Gene: Clifton\_74 Start: 47402, Stop: 47686, Start Num: 27

Candidate Starts for Clifton\_74:

(Start: 27 @47402 has 112 MA's), (29, 47426), (38, 47501), (42, 47630), (44, 47666),

Gene: Coco12\_78 Start: 49002, Stop: 49286, Start Num: 26

Candidate Starts for Coco12\_78:

(21, 48978), (Start: 26 @49002 has 23 MA's), (29, 49026), (38, 49101), (42, 49230), (44, 49266),

Gene: Cornie\_78 Start: 47540, Stop: 47824, Start Num: 27

Candidate Starts for Cornie\_78:

(Start: 27 @47540 has 112 MA's), (29, 47564), (42, 47768), (44, 47804),

Gene: Courthouse\_72 Start: 46987, Stop: 46703, Start Num: 27

Candidate Starts for Courthouse\_72:

(Start: 27 @46987 has 112 MA's), (29, 46963), (42, 46759), (44, 46723),

Gene: DLane\_83 Start: 50315, Stop: 50599, Start Num: 27

Candidate Starts for DLane\_83:

(Start: 27 @50315 has 112 MA's), (29, 50339), (38, 50414), (44, 50579),

Gene: DRBy19\_85 Start: 51131, Stop: 51415, Start Num: 27

Candidate Starts for DRBy19\_85:

(Start: 27 @51131 has 112 MA's), (29, 51155), (38, 51230), (42, 51359), (44, 51395),

Gene: Daenerys\_81 Start: 50626, Stop: 50910, Start Num: 27

Candidate Starts for Daenerys\_81:

(Start: 27 @50626 has 112 MA's), (29, 50650), (38, 50725), (42, 50854), (44, 50890),

Gene: Dallas\_74 Start: 50547, Stop: 50263, Start Num: 27

Candidate Starts for Dallas\_74:

(Start: 27 @50547 has 112 MA's), (29, 50523), (38, 50448), (42, 50319), (44, 50283),

Gene: DeadP\_82 Start: 48110, Stop: 48394, Start Num: 27

Candidate Starts for DeadP\_82:

(4, 47948), (Start: 27 @48110 has 112 MA's), (29, 48134), (38, 48209), (42, 48338), (44, 48374),

Gene: Deb65\_75 Start: 48348, Stop: 48632, Start Num: 27

Candidate Starts for Deb65\_75:

(Start: 27 @48348 has 112 MA's), (29, 48372), (38, 48447), (42, 48576), (44, 48612),

Gene: DirtMcgirt\_80 Start: 46288, Stop: 46572, Start Num: 27

Candidate Starts for DirtMcgirt\_80:

(Start: 27 @46288 has 112 MA's), (29, 46312), (38, 46387), (42, 46516), (44, 46552),

Gene: DmpstrDiver\_75 Start: 50974, Stop: 50690, Start Num: 27

Candidate Starts for DmpstrDiver\_75:

(Start: 27 @50974 has 112 MA's), (29, 50950), (38, 50875), (42, 50746), (44, 50710),

Gene: DoRead\_81 Start: 46952, Stop: 47230, Start Num: 27

Candidate Starts for DoRead\_81:

(Start: 18 @46910 has 2 MA's), (23, 46928), (Start: 27 @46952 has 112 MA's), (28, 46973), (30, 46985), (42, 47174), (44, 47210),

Gene: Donkeykong\_86 Start: 50724, Stop: 51008, Start Num: 27

Candidate Starts for Donkeykong\_86:

(4, 50562), (Start: 27 @50724 has 112 MA's), (29, 50748), (38, 50823), (42, 50952), (44, 50988),

Gene: DotProduct\_76 Start: 47105, Stop: 47389, Start Num: 27

Candidate Starts for DotProduct\_76:

(Start: 27 @47105 has 112 MA's), (29, 47129), (38, 47204), (42, 47333), (44, 47369),

Gene: Drago\_78 Start: 46291, Stop: 46575, Start Num: 27

Candidate Starts for Drago\_78:

(Start: 27 @46291 has 112 MA's), (29, 46315), (38, 46390), (42, 46519), (44, 46555),

Gene: Eish\_84 Start: 49994, Stop: 50278, Start Num: 27

Candidate Starts for Eish\_84:

(Start: 27 @49994 has 112 MA's), (29, 50018), (38, 50093), (42, 50222), (44, 50258),

Gene: Ejimix\_75 Start: 52415, Stop: 52131, Start Num: 27

Candidate Starts for Ejimix\_75:

(Start: 27 @52415 has 112 MA's), (29, 52391), (38, 52316), (42, 52187), (44, 52151),

Gene: Enby\_82 Start: 46567, Stop: 46851, Start Num: 27

Candidate Starts for Enby\_82:

(Start: 27 @46567 has 112 MA's), (29, 46591), (38, 46666), (42, 46795), (44, 46831),

Gene: Enzomatic\_90 Start: 47423, Stop: 47707, Start Num: 27

Candidate Starts for Enzomatic\_90:

(Start: 27 @47423 has 112 MA's), (29, 47447), (38, 47522), (42, 47651), (44, 47687),

Gene: EricMillard\_74 Start: 51619, Stop: 51335, Start Num: 27

Candidate Starts for EricMillard\_74:

(Start: 27 @51619 has 112 MA's), (29, 51595), (38, 51520), (42, 51391), (44, 51355),

Gene: Estave1\_93 Start: 53691, Stop: 53975, Start Num: 27

Candidate Starts for Estave1\_93:

(22, 53676), (Start: 27 @53691 has 112 MA's), (29, 53715), (38, 53790), (42, 53919), (44, 53955),

Gene: Filuzino\_82 Start: 50908, Stop: 51192, Start Num: 27

Candidate Starts for Filuzino\_82:

(Start: 27 @50908 has 112 MA's), (29, 50932), (38, 51007), (42, 51136), (44, 51172),

Gene: Flathead\_81 Start: 48740, Stop: 49024, Start Num: 27

Candidate Starts for Flathead\_81:

(Start: 27 @48740 has 112 MA's), (29, 48764), (38, 48839), (42, 48968), (44, 49004),

Gene: Fruitloop\_78 Start: 48745, Stop: 49029, Start Num: 27

Candidate Starts for Fruitloop\_78:

(20, 48718), (Start: 27 @48745 has 112 MA's), (29, 48769), (38, 48844), (42, 48973), (44, 49009),

Gene: Galactic\_80 Start: 48440, Stop: 48724, Start Num: 27

Candidate Starts for Galactic\_80:

(13, 48380), (Start: 27 @48440 has 112 MA's), (29, 48464), (38, 48539), (42, 48668), (44, 48704),

Gene: Gandalph\_79 Start: 46011, Stop: 46295, Start Num: 27

Candidate Starts for Gandalph\_79:

(Start: 27 @46011 has 112 MA's), (29, 46035), (38, 46110), (42, 46239), (44, 46275),

Gene: Geralt\_75 Start: 48346, Stop: 48630, Start Num: 27

Candidate Starts for Geralt\_75:

(Start: 27 @48346 has 112 MA's), (29, 48370), (38, 48445), (42, 48574), (44, 48610),

Gene: Hades\_80 Start: 46896, Stop: 47180, Start Num: 27

Candidate Starts for Hades\_80:

(Start: 27 @46896 has 112 MA's), (29, 46920), (38, 46995), (42, 47124),

Gene: Halley\_77 Start: 51626, Stop: 51342, Start Num: 27

Candidate Starts for Halley\_77:

(Start: 27 @51626 has 112 MA's), (29, 51602), (38, 51527), (42, 51398), (44, 51362),

Gene: Hamulus\_80 Start: 48587, Stop: 48871, Start Num: 27

Candidate Starts for Hamulus\_80:

(Start: 27 @48587 has 112 MA's), (29, 48611), (38, 48686), (42, 48815), (44, 48851),

Gene: Hannaconda\_70 Start: 46036, Stop: 45752, Start Num: 27

Candidate Starts for Hannaconda\_70:

(Start: 27 @46036 has 112 MA's), (29, 46012), (42, 45808), (44, 45772),

Gene: Harley\_80 Start: 48340, Stop: 48624, Start Num: 27

Candidate Starts for Harley\_80:

(Start: 27 @48340 has 112 MA's), (29, 48364), (38, 48439), (42, 48568), (44, 48604),

Gene: Hlubikazi\_76 Start: 46227, Stop: 46511, Start Num: 26

Candidate Starts for Hlubikazi\_76:

(21, 46203), (Start: 26 @46227 has 23 MA's), (29, 46251), (38, 46326), (42, 46455), (44, 46491),

Gene: HokkenD\_68 Start: 49895, Stop: 49611, Start Num: 27

Candidate Starts for HokkenD\_68:

(Start: 27 @49895 has 112 MA's), (29, 49871), (38, 49796), (42, 49667), (44, 49631),

Gene: Hughesyang\_74 Start: 51585, Stop: 51301, Start Num: 27

Candidate Starts for Hughesyang\_74:

(Start: 27 @51585 has 112 MA's), (29, 51561), (38, 51486), (42, 51357), (44, 51321),

Gene: IMpilo\_76 Start: 46638, Stop: 46922, Start Num: 27

Candidate Starts for IMpilo\_76:

(1, 46392), (2, 46407), (Start: 27 @46638 has 112 MA's), (29, 46662), (38, 46737), (42, 46866), (44, 46902),

Gene: IrishSherpFalk\_81 Start: 49331, Stop: 49615, Start Num: 26

Candidate Starts for IrishSherpFalk\_81:

(Start: 18 @49301 has 2 MA's), (21, 49307), (Start: 26 @49331 has 23 MA's), (29, 49355), (38, 49430), (42, 49559), (44, 49595),

Gene: Jabbawokkie\_91 Start: 47805, Stop: 48089, Start Num: 27

Candidate Starts for Jabbawokkie\_91:

(Start: 27 @47805 has 112 MA's), (29, 47829), (42, 48033), (44, 48069),

Gene: James\_82 Start: 50466, Stop: 50750, Start Num: 27

Candidate Starts for James\_82:

(Start: 27 @50466 has 112 MA's), (29, 50490), (38, 50565), (42, 50694), (44, 50730),

Gene: Jant\_81 Start: 47386, Stop: 47670, Start Num: 27

Candidate Starts for Jant\_81:

(Start: 27 @47386 has 112 MA's), (29, 47410), (38, 47485), (42, 47614), (44, 47650),

Gene: Jarcob\_81 Start: 50063, Stop: 50347, Start Num: 27

Candidate Starts for Jarcob\_81:

(Start: 27 @50063 has 112 MA's), (29, 50087), (38, 50162), (42, 50291), (44, 50327),

Gene: Job42\_81 Start: 51522, Stop: 51818, Start Num: 27

Candidate Starts for Job42\_81:

(Start: 27 @51522 has 112 MA's), (28, 51543), (31, 51558), (39, 51684), (42, 51762), (44, 51798),

Gene: JoeyJr\_82 Start: 50251, Stop: 50535, Start Num: 27

Candidate Starts for JoeyJr\_82:

(Start: 27 @50251 has 112 MA's), (29, 50275), (38, 50350), (42, 50479), (44, 50515),

Gene: JuicyJay\_74 Start: 52760, Stop: 52476, Start Num: 27

Candidate Starts for JuicyJay\_74:

(Start: 27 @52760 has 112 MA's), (29, 52736), (38, 52661), (42, 52532), (44, 52496),

Gene: Kalah2\_70 Start: 50919, Stop: 50635, Start Num: 27

Candidate Starts for Kalah2\_70:

(Start: 27 @50919 has 112 MA's), (29, 50895), (38, 50820), (42, 50691), (44, 50655),

Gene: Kenuha5\_77 Start: 49369, Stop: 49653, Start Num: 27

Candidate Starts for Kenuha5\_77:

(Start: 27 @49369 has 112 MA's), (29, 49393), (38, 49468), (42, 49597), (44, 49633),

Gene: Kingsley\_85 Start: 51609, Stop: 51893, Start Num: 27

Candidate Starts for Kingsley\_85:

(Start: 27 @51609 has 112 MA's), (29, 51633), (42, 51837), (44, 51873),

Gene: Klein\_73 Start: 50165, Stop: 49884, Start Num: 26

Candidate Starts for Klein\_73:

(Start: 26 @50165 has 23 MA's), (29, 50144), (33, 50111), (42, 49940), (44, 49904),

Gene: KristaRAM\_79 Start: 47927, Stop: 48211, Start Num: 27

Candidate Starts for KristaRAM\_79:

(Start: 27 @47927 has 112 MA's), (29, 47951), (38, 48026), (42, 48155), (44, 48191),

Gene: Kumao\_59 Start: 43007, Stop: 43291, Start Num: 27

Candidate Starts for Kumao\_59:

(13, 42947), (Start: 27 @43007 has 112 MA's), (29, 43031), (38, 43106), (42, 43235), (44, 43271),

Gene: Latretium\_82 Start: 48306, Stop: 48590, Start Num: 27

Candidate Starts for Latretium\_82:

(Start: 27 @48306 has 112 MA's), (29, 48330), (38, 48405), (42, 48534), (44, 48570),

Gene: Leperchaun\_80 Start: 49485, Stop: 49769, Start Num: 27

Candidate Starts for Leperchaun\_80:

(Start: 27 @49485 has 112 MA's), (29, 49509), (38, 49584), (42, 49713), (44, 49749),

Gene: LilMoolah\_82 Start: 49634, Stop: 49918, Start Num: 27

Candidate Starts for LilMoolah\_82:

(6, 49496), (12, 49559), (Start: 27 @49634 has 112 MA's), (29, 49658), (38, 49733), (42, 49862), (44, 49898),

Gene: LittleE\_77 Start: 50428, Stop: 50147, Start Num: 26

Candidate Starts for LittleE\_77:

(Start: 26 @50428 has 23 MA's), (29, 50407), (38, 50332), (42, 50203), (44, 50167),

Gene: Llij\_77 Start: 46445, Stop: 46729, Start Num: 27

Candidate Starts for Llij\_77:

(Start: 27 @46445 has 112 MA's), (29, 46469), (38, 46544), (42, 46673), (44, 46709),

Gene: LordVader\_75 Start: 44278, Stop: 44562, Start Num: 26

Candidate Starts for LordVader\_75:

(Start: 18 @44248 has 2 MA's), (21, 44254), (Start: 26 @44278 has 23 MA's), (29, 44302), (42, 44506), (44, 44542),

Gene: Lorde\_81 Start: 45732, Stop: 46016, Start Num: 27

Candidate Starts for Lorde\_81:

(Start: 27 @45732 has 112 MA's), (29, 45756), (38, 45831), (42, 45960), (44, 45996),

Gene: Lucia\_80 Start: 46580, Stop: 46864, Start Num: 27

Candidate Starts for Lucia\_80:

(Start: 27 @46580 has 112 MA's), (29, 46604), (38, 46679), (42, 46808), (44, 46844),

Gene: LunaBlu\_84 Start: 49474, Stop: 49758, Start Num: 27

Candidate Starts for LunaBlu\_84:

(Start: 27 @49474 has 112 MA's), (29, 49498), (38, 49573), (42, 49702), (44, 49738),

Gene: MadMen\_87 Start: 49600, Stop: 49884, Start Num: 27

Candidate Starts for MadMen\_87:

(13, 49540), (Start: 27 @49600 has 112 MA's), (29, 49624), (38, 49699), (42, 49828), (44, 49864),

Gene: Manda\_43 Start: 35798, Stop: 35514, Start Num: 27

Candidate Starts for Manda\_43:

(Start: 27 @35798 has 112 MA's), (29, 35774), (38, 35699), (42, 35570), (44, 35534),

Gene: Mandlovu\_76 Start: 46169, Stop: 46453, Start Num: 26

Candidate Starts for Mandlovu\_76:

(21, 46145), (Start: 26 @46169 has 23 MA's), (29, 46193), (38, 46268), (42, 46397), (44, 46433),

Gene: Mantra\_79 Start: 48634, Stop: 49023, Start Num: 8

Candidate Starts for Mantra\_79:

(Start: 7 @48610 has 2 MA's), (Start: 8 @48634 has 1 MA's), (10, 48658), (17, 48703), (24, 48730), (25, 48733), (Start: 27 @48748 has 112 MA's), (28, 48769), (30, 48781), (35, 48811), (36, 48817), (40, 48931), (41, 48937), (45, 49012),

Gene: Marker\_87 Start: 49400, Stop: 49684, Start Num: 27

Candidate Starts for Marker\_87:

(Start: 27 @49400 has 112 MA's), (29, 49424), (38, 49499), (42, 49628), (44, 49664),

Gene: Medindi\_85 Start: 50197, Stop: 50481, Start Num: 27

Candidate Starts for Medindi\_85:

(1, 49951), (2, 49966), (Start: 27 @50197 has 112 MA's), (29, 50221), (42, 50425), (44, 50461),

Gene: MiaZeal\_76 Start: 48021, Stop: 47737, Start Num: 27

Candidate Starts for MiaZeal\_76:

(Start: 27 @48021 has 112 MA's), (29, 47997), (38, 47922), (42, 47793), (44, 47757),

Gene: Michley\_64 Start: 41497, Stop: 41090, Start Num: 27  
Candidate Starts for Michley\_64:  
(3, 41698), (14, 41554), (15, 41551), (Start: 27 @41497 has 112 MA's), (32, 41449), (37, 41389), (47, 41113),

Gene: MilanaBonita\_77 Start: 48008, Stop: 48292, Start Num: 27  
Candidate Starts for MilanaBonita\_77:  
(Start: 27 @48008 has 112 MA's), (29, 48032), (38, 48107), (42, 48236), (44, 48272),

Gene: MilleniumForce\_82 Start: 49757, Stop: 50041, Start Num: 27  
Candidate Starts for MilleniumForce\_82:  
(Start: 27 @49757 has 112 MA's), (29, 49781), (38, 49856), (42, 49985), (44, 50021),

Gene: MinionDave\_77 Start: 48491, Stop: 48775, Start Num: 27  
Candidate Starts for MinionDave\_77:  
(Start: 27 @48491 has 112 MA's), (29, 48515), (42, 48719), (44, 48755),

Gene: Minnie\_77 Start: 50537, Stop: 50821, Start Num: 26  
Candidate Starts for Minnie\_77:  
(Start: 18 @50507 has 2 MA's), (21, 50513), (Start: 26 @50537 has 23 MA's), (29, 50561), (38, 50636), (42, 50765), (44, 50801),

Gene: Mova\_80 Start: 47852, Stop: 48136, Start Num: 27  
Candidate Starts for Mova\_80:  
(Start: 27 @47852 has 112 MA's), (29, 47876), (38, 47951), (42, 48080), (44, 48116),

Gene: Mozy\_88 Start: 48337, Stop: 48621, Start Num: 27  
Candidate Starts for Mozy\_88:  
(Start: 27 @48337 has 112 MA's), (29, 48361), (38, 48436), (42, 48565), (44, 48601),

Gene: MrGordo\_63 Start: 41253, Stop: 40939, Start Num: 18  
Candidate Starts for MrGordo\_63:  
(Start: 18 @41253 has 2 MA's), (21, 41247), (Start: 26 @41223 has 23 MA's), (29, 41199), (42, 40995), (44, 40959),

Gene: Ms6\_82 Start: 45701, Stop: 45985, Start Num: 27  
Candidate Starts for Ms6\_82:  
(Start: 27 @45701 has 112 MA's), (29, 45725), (38, 45800), (42, 45929), (44, 45965),

Gene: Nekros\_72 Start: 49247, Stop: 48963, Start Num: 27  
Candidate Starts for Nekros\_72:  
(Start: 27 @49247 has 112 MA's), (29, 49223), (38, 49148), (42, 49019), (44, 48983),

Gene: NewHope4\_84 Start: 47569, Stop: 47853, Start Num: 27  
Candidate Starts for NewHope4\_84:  
(Start: 27 @47569 has 112 MA's), (29, 47593), (38, 47668), (42, 47797), (44, 47833),

Gene: Nibley\_65 Start: 44964, Stop: 44680, Start Num: 27  
Candidate Starts for Nibley\_65:  
(13, 45024), (Start: 27 @44964 has 112 MA's), (29, 44940), (38, 44865), (42, 44736), (44, 44700),

Gene: NihilNomen\_76 Start: 51713, Stop: 51429, Start Num: 27  
Candidate Starts for NihilNomen\_76:

(Start: 27 @51713 has 112 MA's), (29, 51689), (38, 51614), (42, 51485), (44, 51449),

Gene: Nimbo\_74 Start: 48349, Stop: 48633, Start Num: 27

Candidate Starts for Nimbo\_74:

(Start: 27 @48349 has 112 MA's), (29, 48373), (38, 48448), (42, 48577), (44, 48613),

Gene: Nivrat\_80 Start: 49507, Stop: 49791, Start Num: 27

Candidate Starts for Nivrat\_80:

(6, 49369), (12, 49432), (Start: 27 @49507 has 112 MA's), (29, 49531), (38, 49606), (42, 49735), (44, 49771),

Gene: Odette\_74 Start: 50756, Stop: 50472, Start Num: 27

Candidate Starts for Odette\_74:

(Start: 27 @50756 has 112 MA's), (29, 50732), (38, 50657), (42, 50528), (44, 50492),

Gene: Ogopogo\_87 Start: 48817, Stop: 49101, Start Num: 27

Candidate Starts for Ogopogo\_87:

(Start: 27 @48817 has 112 MA's), (29, 48841), (38, 48916), (42, 49045), (44, 49081),

Gene: Okabe\_77 Start: 45885, Stop: 46169, Start Num: 27

Candidate Starts for Okabe\_77:

(Start: 27 @45885 has 112 MA's), (29, 45909), (38, 45984), (42, 46113), (44, 46149),

Gene: OldBen\_79 Start: 49741, Stop: 50025, Start Num: 27

Candidate Starts for OldBen\_79:

(Start: 27 @49741 has 112 MA's), (29, 49765), (38, 49840), (42, 49969), (44, 50005),

Gene: OlympiaSaint\_81 Start: 49408, Stop: 49692, Start Num: 27

Candidate Starts for OlympiaSaint\_81:

(Start: 27 @49408 has 112 MA's), (29, 49432), (38, 49507), (42, 49636), (44, 49672),

Gene: Omega\_79 Start: 51648, Stop: 51367, Start Num: 26

Candidate Starts for Omega\_79:

(Start: 26 @51648 has 23 MA's), (29, 51627), (38, 51552), (42, 51423), (44, 51387),

Gene: PHappiness\_82 Start: 50570, Stop: 50854, Start Num: 27

Candidate Starts for PHappiness\_82:

(Start: 27 @50570 has 112 MA's), (29, 50594), (38, 50669), (42, 50798), (44, 50834),

Gene: PMC\_78 Start: 47902, Stop: 48186, Start Num: 27

Candidate Starts for PMC\_78:

(Start: 27 @47902 has 112 MA's), (29, 47926), (38, 48001), (42, 48130), (44, 48166),

Gene: Pepe\_59 Start: 39848, Stop: 39564, Start Num: 26

Candidate Starts for Pepe\_59:

(Start: 18 @39878 has 2 MA's), (21, 39872), (Start: 26 @39848 has 23 MA's), (29, 39824), (38, 39749), (42, 39620), (44, 39584),

Gene: Phalconet\_78 Start: 48031, Stop: 48315, Start Num: 27

Candidate Starts for Phalconet\_78:

(Start: 27 @48031 has 112 MA's), (29, 48055), (42, 48259), (44, 48295),

Gene: Phanphagia\_80 Start: 49405, Stop: 49689, Start Num: 27

Candidate Starts for Phanphagia\_80:  
(Start: 27 @49405 has 112 MA's), (29, 49429), (38, 49504), (42, 49633), (44, 49669),

Gene: Phatniss\_78 Start: 47540, Stop: 47824, Start Num: 27  
Candidate Starts for Phatniss\_78:  
(Start: 27 @47540 has 112 MA's), (29, 47564), (38, 47639), (42, 47768), (44, 47804),

Gene: PhesterPhotato\_85 Start: 49202, Stop: 49483, Start Num: 26  
Candidate Starts for PhesterPhotato\_85:  
(Start: 26 @49202 has 23 MA's), (29, 49223), (38, 49298), (42, 49427), (44, 49463),

Gene: Philus\_84 Start: 51107, Stop: 51391, Start Num: 27  
Candidate Starts for Philus\_84:  
(Start: 27 @51107 has 112 MA's), (29, 51131), (38, 51206), (42, 51335), (44, 51371),

Gene: Phoebus\_78 Start: 52895, Stop: 52611, Start Num: 27  
Candidate Starts for Phoebus\_78:  
(Start: 27 @52895 has 112 MA's), (29, 52871), (38, 52796), (42, 52667), (44, 52631),

Gene: Poise\_9 Start: 2787, Stop: 3071, Start Num: 27  
Candidate Starts for Poise\_9:  
(Start: 27 @2787 has 112 MA's), (29, 2811), (38, 2886), (42, 3015), (44, 3051),

Gene: Polo2Bam\_89 Start: 47423, Stop: 47707, Start Num: 27  
Candidate Starts for Polo2Bam\_89:  
(Start: 27 @47423 has 112 MA's), (29, 47447), (38, 47522), (42, 47651), (44, 47687),

Gene: PopTart\_73 Start: 46094, Stop: 46378, Start Num: 26  
Candidate Starts for PopTart\_73:  
(21, 46070), (Start: 26 @46094 has 23 MA's), (29, 46118), (38, 46193), (42, 46322), (44, 46358),

Gene: Porcelain\_75 Start: 48021, Stop: 47737, Start Num: 27  
Candidate Starts for Porcelain\_75:  
(Start: 27 @48021 has 112 MA's), (29, 47997), (38, 47922), (42, 47793), (44, 47757),

Gene: Raela\_9 Start: 3191, Stop: 3475, Start Num: 27  
Candidate Starts for Raela\_9:  
(Start: 27 @3191 has 112 MA's), (29, 3215), (38, 3290), (42, 3419), (44, 3455),

Gene: Rearden\_68 Start: 46777, Stop: 46493, Start Num: 27  
Candidate Starts for Rearden\_68:  
(Start: 27 @46777 has 112 MA's), (29, 46753), (42, 46549), (44, 46513),

Gene: Rita\_88 Start: 51756, Stop: 52040, Start Num: 27  
Candidate Starts for Rita\_88:  
(Start: 27 @51756 has 112 MA's), (29, 51780), (38, 51855), (42, 51984), (44, 52020),

Gene: RitaG\_82 Start: 50372, Stop: 50656, Start Num: 27  
Candidate Starts for RitaG\_82:  
(Start: 27 @50372 has 112 MA's), (29, 50396), (38, 50471), (42, 50600), (44, 50636),

Gene: Rockne\_82 Start: 47914, Stop: 48198, Start Num: 27  
Candidate Starts for Rockne\_82:

(Start: 27 @47914 has 112 MA's), (29, 47938), (38, 48013), (42, 48142), (44, 48178),

Gene: SG4\_81 Start: 49453, Stop: 49737, Start Num: 27

Candidate Starts for SG4\_81:

(Start: 27 @49453 has 112 MA's), (29, 49477), (38, 49552), (42, 49681), (44, 49717),

Gene: Sandalphon\_75 Start: 48522, Stop: 48806, Start Num: 26

Candidate Starts for Sandalphon\_75:

(Start: 18 @48492 has 2 MA's), (21, 48498), (Start: 26 @48522 has 23 MA's), (29, 48546), (38, 48621), (42, 48750), (44, 48786),

Gene: Sarma624\_80 Start: 45621, Stop: 45905, Start Num: 26

Candidate Starts for Sarma624\_80:

(21, 45597), (Start: 26 @45621 has 23 MA's), (29, 45645), (38, 45720), (42, 45849), (44, 45885),

Gene: SassyB\_73 Start: 46094, Stop: 46378, Start Num: 26

Candidate Starts for SassyB\_73:

(21, 46070), (Start: 26 @46094 has 23 MA's), (29, 46118), (38, 46193), (42, 46322), (44, 46358),

Gene: Schatzie\_70 Start: 50503, Stop: 50219, Start Num: 27

Candidate Starts for Schatzie\_70:

(Start: 27 @50503 has 112 MA's), (29, 50479), (38, 50404), (42, 50275), (44, 50239),

Gene: SeaLumen\_86 Start: 47423, Stop: 47707, Start Num: 27

Candidate Starts for SeaLumen\_86:

(Start: 27 @47423 has 112 MA's), (29, 47447), (38, 47522), (42, 47651), (44, 47687),

Gene: Seagreen\_80 Start: 49149, Stop: 49481, Start Num: 16

Candidate Starts for Seagreen\_80:

(5, 49053), (Start: 16 @49149 has 1 MA's), (21, 49164), (Start: 27 @49197 has 112 MA's), (29, 49221), (42, 49425), (44, 49461),

Gene: Shaboozey\_69 Start: 45986, Stop: 45702, Start Num: 27

Candidate Starts for Shaboozey\_69:

(Start: 27 @45986 has 112 MA's), (29, 45962), (42, 45758), (44, 45722),

Gene: Shauna1\_81 Start: 49655, Stop: 49939, Start Num: 27

Candidate Starts for Shauna1\_81:

(Start: 27 @49655 has 112 MA's), (29, 49679), (38, 49754), (42, 49883), (44, 49919),

Gene: SiSi\_78 Start: 48135, Stop: 48548, Start Num: 7

Candidate Starts for SiSi\_78:

(Start: 7 @48135 has 2 MA's), (Start: 8 @48159 has 1 MA's), (10, 48183), (17, 48228), (24, 48255), (25, 48258), (Start: 27 @48273 has 112 MA's), (28, 48294), (30, 48306), (35, 48336), (36, 48342), (40, 48456), (41, 48462), (45, 48537),

Gene: SkiPole\_68 Start: 41922, Stop: 41608, Start Num: 18

Candidate Starts for SkiPole\_68:

(Start: 18 @41922 has 2 MA's), (21, 41916), (Start: 26 @41892 has 23 MA's), (29, 41868), (38, 41793), (42, 41664), (44, 41628),

Gene: Solon\_60 Start: 40387, Stop: 40100, Start Num: 27

Candidate Starts for Solon\_60:

(Start: 27 @40387 has 112 MA's), (28, 40366), (31, 40351), (34, 40327), (39, 40234), (42, 40156), (44, 40120),

Gene: Soul22\_82 Start: 47187, Stop: 47471, Start Num: 26

Candidate Starts for Soul22\_82:

(Start: 18 @47157 has 2 MA's), (21, 47163), (Start: 26 @47187 has 23 MA's), (29, 47211), (38, 47286), (42, 47415), (44, 47451),

Gene: Squint\_76 Start: 48140, Stop: 47856, Start Num: 27

Candidate Starts for Squint\_76:

(Start: 27 @48140 has 112 MA's), (29, 48116), (38, 48041), (42, 47912), (44, 47876),

Gene: Squirty\_81 Start: 52224, Stop: 52505, Start Num: 27

Candidate Starts for Squirty\_81:

(Start: 27 @52224 has 112 MA's), (29, 52248), (38, 52323), (42, 52452), (43, 52476), (44, 52488), (46, 52494),

Gene: StAnnes\_83 Start: 50113, Stop: 50397, Start Num: 27

Candidate Starts for StAnnes\_83:

(20, 50083), (Start: 27 @50113 has 112 MA's), (29, 50137), (38, 50212), (42, 50341), (44, 50377),

Gene: Strokeseat\_76 Start: 46226, Stop: 46510, Start Num: 26

Candidate Starts for Strokeseat\_76:

(21, 46202), (Start: 26 @46226 has 23 MA's), (29, 46250), (38, 46325), (42, 46454), (44, 46490),

Gene: Superphikiman\_73 Start: 47231, Stop: 46947, Start Num: 27

Candidate Starts for Superphikiman\_73:

(Start: 27 @47231 has 112 MA's), (29, 47207), (38, 47132), (42, 47003), (44, 46967),

Gene: Taj\_88 Start: 50947, Stop: 51231, Start Num: 27

Candidate Starts for Taj\_88:

(4, 50785), (Start: 27 @50947 has 112 MA's), (29, 50971), (38, 51046), (42, 51175), (44, 51211),

Gene: Tesla\_9 Start: 2778, Stop: 3062, Start Num: 27

Candidate Starts for Tesla\_9:

(Start: 27 @2778 has 112 MA's), (29, 2802), (38, 2877), (42, 3006), (44, 3042),

Gene: ThreeRngTarjay\_73 Start: 51787, Stop: 51503, Start Num: 27

Candidate Starts for ThreeRngTarjay\_73:

(Start: 27 @51787 has 112 MA's), (29, 51763), (38, 51688), (42, 51559), (44, 51523),

Gene: Tweety\_82 Start: 50025, Stop: 50309, Start Num: 27

Candidate Starts for Tweety\_82:

(4, 49863), (Start: 27 @50025 has 112 MA's), (29, 50049), (38, 50124), (42, 50253), (44, 50289),

Gene: UncleRicky\_80 Start: 47788, Stop: 48072, Start Num: 27

Candidate Starts for UncleRicky\_80:

(Start: 27 @47788 has 112 MA's), (29, 47812), (38, 47887), (42, 48016), (44, 48052),

Gene: VRedHorse\_86 Start: 47830, Stop: 48114, Start Num: 26

Candidate Starts for VRedHorse\_86:

(21, 47806), (Start: 26 @47830 has 23 MA's), (29, 47854), (38, 47929), (42, 48058), (44, 48094),

Gene: Veteran\_74 Start: 48003, Stop: 48416, Start Num: 7

Candidate Starts for Veteran\_74:

(Start: 7 @48003 has 2 MA's), (Start: 8 @48027 has 1 MA's), (10, 48051), (17, 48096), (24, 48123), (25, 48126), (Start: 27 @48141 has 112 MA's), (28, 48162), (30, 48174), (35, 48204), (36, 48210), (40, 48324), (41, 48330), (45, 48405),

Gene: Violac\_83 Start: 50504, Stop: 50788, Start Num: 27

Candidate Starts for Violac\_83:

(Start: 27 @50504 has 112 MA's), (29, 50528), (38, 50603), (42, 50732), (44, 50768),

Gene: Wanda\_77 Start: 50474, Stop: 50193, Start Num: 26

Candidate Starts for Wanda\_77:

(Start: 26 @50474 has 23 MA's), (29, 50453), (33, 50420), (42, 50249), (44, 50213),

Gene: Wee\_87 Start: 51023, Stop: 51307, Start Num: 27

Candidate Starts for Wee\_87:

(4, 50861), (Start: 27 @51023 has 112 MA's), (29, 51047), (38, 51122), (42, 51251), (44, 51287),

Gene: WillSterrel\_80 Start: 49364, Stop: 49648, Start Num: 26

Candidate Starts for WillSterrel\_80:

(Start: 18 @49334 has 2 MA's), (21, 49340), (Start: 26 @49364 has 23 MA's), (29, 49388), (38, 49463), (42, 49592), (44, 49628),

Gene: XFactor\_77 Start: 48229, Stop: 48513, Start Num: 27

Candidate Starts for XFactor\_77:

(Start: 27 @48229 has 112 MA's), (29, 48253), (38, 48328), (44, 48493),

Gene: Yeet\_71 Start: 50004, Stop: 49720, Start Num: 27

Candidate Starts for Yeet\_71:

(Start: 27 @50004 has 112 MA's), (29, 49980), (42, 49776), (44, 49740),

Gene: Zapner\_90 Start: 47899, Stop: 48183, Start Num: 27

Candidate Starts for Zapner\_90:

(Start: 27 @47899 has 112 MA's), (29, 47923), (42, 48127), (44, 48163),

Gene: Zelink\_73 Start: 52099, Stop: 51815, Start Num: 27

Candidate Starts for Zelink\_73:

(Start: 27 @52099 has 112 MA's), (29, 52075), (38, 52000), (42, 51871), (44, 51835),