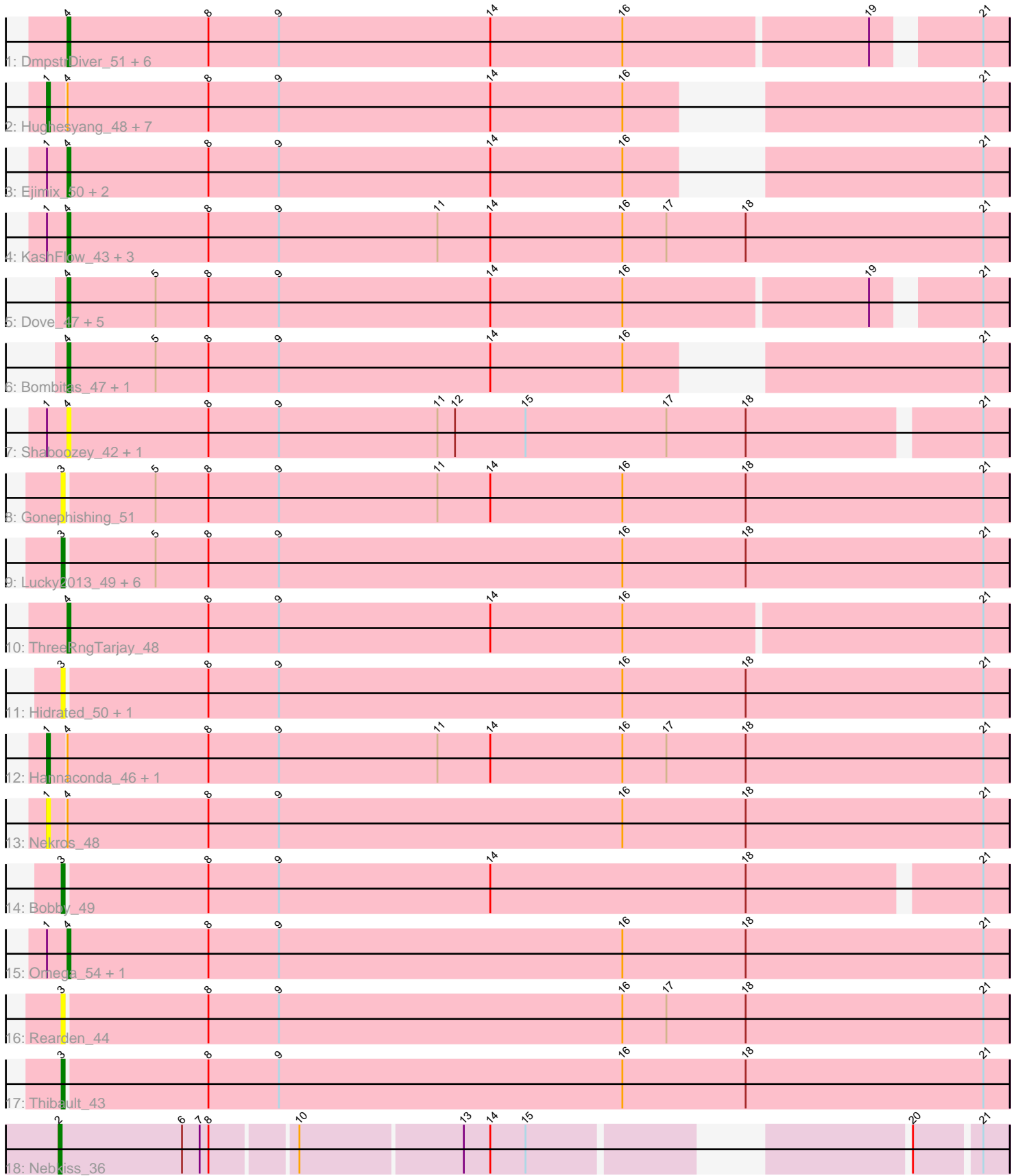


Pham 301452



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 301452 Report

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

Pham number 301452 has 52 members, 11 are drafts.

Phages represented in each track:

- Track 1 : DmpstrDiver\_51, Duke13\_53, Kalah2\_50, Optimus\_55, Minerva\_56, Odette\_50, Schatzie\_47
- Track 2 : Hughesyang\_48, Wanda\_56, Beem\_50, Phoebus\_49, Halley\_50, HokkenD\_43, Yeet\_48, BAKA\_54
- Track 3 : Ejimix\_50, EricMillard\_50, Bagrid\_49
- Track 4 : KashFlow\_43, Redno2\_48, Dallas\_52, Zelink\_51
- Track 5 : Dove\_47, Pound\_52, Constella\_42, JuicyJay\_52, Klein\_50, Xiaokay\_45
- Track 6 : Bombitas\_47, NihilNomen\_49
- Track 7 : Shaboozey\_42, BronnyJames\_42
- Track 8 : Gonephishing\_51
- Track 9 : Lucky2013\_49, Porcelain\_48, Courthouse\_49, Superphikiman\_49, Ariel\_49, Squint\_48, MiaZeal\_49
- Track 10 : ThreeRngTarjay\_48
- Track 11 : Hidrated\_50, Marleymoo\_51
- Track 12 : Hannaconda\_46, LittleE\_54
- Track 13 : Nekros\_48
- Track 14 : Bobby\_49
- Track 15 : Omega\_54, Nibley\_44
- Track 16 : Rearden\_44
- Track 17 : Thibault\_43
- Track 18 : Nebkiss\_36

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

The start number called the most often in the published annotations is 4, it was called in 21 of the 41 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Bagrid\_49, Bombitas\_47, BronnyJames\_42, Constella\_42, Dallas\_52, DmpstrDiver\_51, Dove\_47, Duke13\_53, Ejimix\_50, EricMillard\_50, JuicyJay\_52, Kalah2\_50, KashFlow\_43, Klein\_50, Minerva\_56, Nibley\_44, NihilNomen\_49, Odette\_50, Omega\_54, Optimus\_55, Pound\_52, Redno2\_48, Schatzie\_47, Shaboozey\_42, ThreeRngTarjay\_48, Xiaokay\_45, Zelink\_51,

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

- BAKA\_54, Beem\_50, Halley\_50, Hannaconda\_46, HokkenD\_43, Hughesyang\_48, LittleE\_54, Nekros\_48, Phoebus\_49, Wanda\_56, Yeet\_48,

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

- Ariel\_49, Bobby\_49, Courthouse\_49, Gonephishing\_51, Hidrated\_50, Lucky2013\_49, Marleymoo\_51, MiaZeal\_49, Nebkiss\_36, Porcelain\_48, Rearden\_44, Squint\_48, Superphikiman\_49, Thibault\_43,

### Summary by start number:

Start 1:

- Found in 22 of 52 ( 42.3% ) of genes in pham
- Manual Annotations of this start: 10 of 41
- Called 50.0% of time when present
- Phage (with cluster) where this start called: BAKA\_54 (J), Beem\_50 (J), Halley\_50 (J), Hannaconda\_46 (J), HokkenD\_43 (J), Hughesyang\_48 (J), LittleE\_54 (J), Nekros\_48 (J), Phoebus\_49 (J), Wanda\_56 (J), Yeet\_48 (J),

Start 2:

- Found in 1 of 52 ( 1.9% ) of genes in pham
- Manual Annotations of this start: 1 of 41
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Nebkiss\_36 (X),

Start 3:

- Found in 13 of 52 ( 25.0% ) of genes in pham
- Manual Annotations of this start: 9 of 41
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ariel\_49 (J), Bobby\_49 (J), Courthouse\_49 (J), Gonephishing\_51 (J), Hidrated\_50 (J), Lucky2013\_49 (J), Marleymoo\_51 (J), MiaZeal\_49 (J), Porcelain\_48 (J), Rearden\_44 (J), Squint\_48 (J), Superphikiman\_49 (J), Thibault\_43 (J),

Start 4:

- Found in 38 of 52 ( 73.1% ) of genes in pham
- Manual Annotations of this start: 21 of 41
- Called 71.1% of time when present
- Phage (with cluster) where this start called: Bagrid\_49 (J), Bombitas\_47 (J), BronnyJames\_42 (J), Constella\_42 (J), Dallas\_52 (J), DmpstrDiver\_51 (J), Dove\_47 (J), Duke13\_53 (J), Ejimix\_50 (J), EricMillard\_50 (J), JuicyJay\_52 (J), Kalah2\_50 (J), KashFlow\_43 (J), Klein\_50 (J), Minerva\_56 (J), Nibley\_44 (J), NihilNomen\_49 (J), Odette\_50 (J), Omega\_54 (J), Optimus\_55 (J), Pound\_52 (J), Redno2\_48 (J), Schatzie\_47 (J), Shaboozey\_42 (J), ThreeRngTarjay\_48 (J), Xiaokay\_45 (J), Zelink\_51 (J),

### Summary by clusters:

There are 2 clusters represented in this pham: X, J,

Info for manual annotations of cluster J:

- Start number 1 was manually annotated 10 times for cluster J.
- Start number 3 was manually annotated 9 times for cluster J.

- Start number 4 was manually annotated 21 times for cluster J.

Info for manual annotations of cluster X:

- Start number 2 was manually annotated 1 time for cluster X.

### **Gene Information:**

Gene: Ariel\_49 Start: 39699, Stop: 40019, Start Num: 3

Candidate Starts for Ariel\_49:

(Start: 3 @39699 has 9 MA's), (5, 39729), (8, 39747), (9, 39771), (16, 39888), (18, 39930), (21, 40011),

Gene: BAKA\_54 Start: 43546, Stop: 43842, Start Num: 1

Candidate Starts for BAKA\_54:

(Start: 1 @43546 has 10 MA's), (Start: 4 @43552 has 21 MA's), (8, 43600), (9, 43624), (14, 43696), (16, 43741), (21, 43834),

Gene: Bagrid\_49 Start: 42885, Stop: 43175, Start Num: 4

Candidate Starts for Bagrid\_49:

(Start: 1 @42879 has 10 MA's), (Start: 4 @42885 has 21 MA's), (8, 42933), (9, 42957), (14, 43029), (16, 43074), (21, 43167),

Gene: Beem\_50 Start: 43445, Stop: 43741, Start Num: 1

Candidate Starts for Beem\_50:

(Start: 1 @43445 has 10 MA's), (Start: 4 @43451 has 21 MA's), (8, 43499), (9, 43523), (14, 43595), (16, 43640), (21, 43733),

Gene: Bobby\_49 Start: 42027, Stop: 42341, Start Num: 3

Candidate Starts for Bobby\_49:

(Start: 3 @42027 has 9 MA's), (8, 42075), (9, 42099), (14, 42171), (18, 42258), (21, 42333),

Gene: Bombitas\_47 Start: 43045, Stop: 43335, Start Num: 4

Candidate Starts for Bombitas\_47:

(Start: 4 @43045 has 21 MA's), (5, 43075), (8, 43093), (9, 43117), (14, 43189), (16, 43234), (21, 43327),

Gene: BronnyJames\_42 Start: 37290, Stop: 37604, Start Num: 4

Candidate Starts for BronnyJames\_42:

(Start: 1 @37284 has 10 MA's), (Start: 4 @37290 has 21 MA's), (8, 37338), (9, 37362), (11, 37416), (12, 37422), (15, 37446), (17, 37494), (18, 37521), (21, 37596),

Gene: Constella\_42 Start: 39591, Stop: 39899, Start Num: 4

Candidate Starts for Constella\_42:

(Start: 4 @39591 has 21 MA's), (5, 39621), (8, 39639), (9, 39663), (14, 39735), (16, 39780), (19, 39861), (21, 39891),

Gene: Courthouse\_49 Start: 40103, Stop: 40423, Start Num: 3

Candidate Starts for Courthouse\_49:

(Start: 3 @40103 has 9 MA's), (5, 40133), (8, 40151), (9, 40175), (16, 40292), (18, 40334), (21, 40415),

Gene: Dallas\_52 Start: 42976, Stop: 43296, Start Num: 4

Candidate Starts for Dallas\_52:

(Start: 1 @42970 has 10 MA's), (Start: 4 @42976 has 21 MA's), (8, 43024), (9, 43048), (11, 43102), (14, 43120), (16, 43165), (17, 43180), (18, 43207), (21, 43288),

Gene: DmpstrDiver\_51 Start: 42981, Stop: 43289, Start Num: 4  
Candidate Starts for DmpstrDiver\_51:

(Start: 4 @42981 has 21 MA's), (8, 43029), (9, 43053), (14, 43125), (16, 43170), (19, 43251), (21, 43281),

Gene: Dove\_47 Start: 42515, Stop: 42823, Start Num: 4  
Candidate Starts for Dove\_47:

(Start: 4 @42515 has 21 MA's), (5, 42545), (8, 42563), (9, 42587), (14, 42659), (16, 42704), (19, 42785), (21, 42815),

Gene: Duke13\_53 Start: 43299, Stop: 43607, Start Num: 4  
Candidate Starts for Duke13\_53:

(Start: 4 @43299 has 21 MA's), (8, 43347), (9, 43371), (14, 43443), (16, 43488), (19, 43569), (21, 43599),

Gene: Ejimix\_50 Start: 44236, Stop: 44526, Start Num: 4  
Candidate Starts for Ejimix\_50:

(Start: 1 @44230 has 10 MA's), (Start: 4 @44236 has 21 MA's), (8, 44284), (9, 44308), (14, 44380), (16, 44425), (21, 44518),

Gene: EricMillard\_50 Start: 43737, Stop: 44027, Start Num: 4  
Candidate Starts for EricMillard\_50:

(Start: 1 @43731 has 10 MA's), (Start: 4 @43737 has 21 MA's), (8, 43785), (9, 43809), (14, 43881), (16, 43926), (21, 44019),

Gene: Gonephishing\_51 Start: 41381, Stop: 41701, Start Num: 3  
Candidate Starts for Gonephishing\_51:

(Start: 3 @41381 has 9 MA's), (5, 41411), (8, 41429), (9, 41453), (11, 41507), (14, 41525), (16, 41570), (18, 41612), (21, 41693),

Gene: Halley\_50 Start: 43444, Stop: 43740, Start Num: 1  
Candidate Starts for Halley\_50:

(Start: 1 @43444 has 10 MA's), (Start: 4 @43450 has 21 MA's), (8, 43498), (9, 43522), (14, 43594), (16, 43639), (21, 43732),

Gene: Hannaconda\_46 Start: 37923, Stop: 38249, Start Num: 1  
Candidate Starts for Hannaconda\_46:

(Start: 1 @37923 has 10 MA's), (Start: 4 @37929 has 21 MA's), (8, 37977), (9, 38001), (11, 38055), (14, 38073), (16, 38118), (17, 38133), (18, 38160), (21, 38241),

Gene: Hidrated\_50 Start: 43219, Stop: 43539, Start Num: 3  
Candidate Starts for Hidrated\_50:

(Start: 3 @43219 has 9 MA's), (8, 43267), (9, 43291), (16, 43408), (18, 43450), (21, 43531),

Gene: HokkenD\_43 Start: 41713, Stop: 42009, Start Num: 1  
Candidate Starts for HokkenD\_43:

(Start: 1 @41713 has 10 MA's), (Start: 4 @41719 has 21 MA's), (8, 41767), (9, 41791), (14, 41863), (16, 41908), (21, 42001),

Gene: Hughesyang\_48 Start: 43373, Stop: 43669, Start Num: 1

Candidate Starts for Hughesyang\_48:

(Start: 1 @43373 has 10 MA's), (Start: 4 @43379 has 21 MA's), (8, 43427), (9, 43451), (14, 43523), (16, 43568), (21, 43661),

Gene: JuicyJay\_52 Start: 45208, Stop: 45516, Start Num: 4

Candidate Starts for JuicyJay\_52:

(Start: 4 @45208 has 21 MA's), (5, 45238), (8, 45256), (9, 45280), (14, 45352), (16, 45397), (19, 45478), (21, 45508),

Gene: Kalah2\_50 Start: 43787, Stop: 44095, Start Num: 4

Candidate Starts for Kalah2\_50:

(Start: 4 @43787 has 21 MA's), (8, 43835), (9, 43859), (14, 43931), (16, 43976), (19, 44057), (21, 44087),

Gene: KashFlow\_43 Start: 37550, Stop: 37870, Start Num: 4

Candidate Starts for KashFlow\_43:

(Start: 1 @37544 has 10 MA's), (Start: 4 @37550 has 21 MA's), (8, 37598), (9, 37622), (11, 37676), (14, 37694), (16, 37739), (17, 37754), (18, 37781), (21, 37862),

Gene: Klein\_50 Start: 43020, Stop: 43328, Start Num: 4

Candidate Starts for Klein\_50:

(Start: 4 @43020 has 21 MA's), (5, 43050), (8, 43068), (9, 43092), (14, 43164), (16, 43209), (19, 43290), (21, 43320),

Gene: LittleE\_54 Start: 43242, Stop: 43568, Start Num: 1

Candidate Starts for LittleE\_54:

(Start: 1 @43242 has 10 MA's), (Start: 4 @43248 has 21 MA's), (8, 43296), (9, 43320), (11, 43374), (14, 43392), (16, 43437), (17, 43452), (18, 43479), (21, 43560),

Gene: Lucky2013\_49 Start: 40239, Stop: 40559, Start Num: 3

Candidate Starts for Lucky2013\_49:

(Start: 3 @40239 has 9 MA's), (5, 40269), (8, 40287), (9, 40311), (16, 40428), (18, 40470), (21, 40551),

Gene: Marleymoo\_51 Start: 43117, Stop: 43437, Start Num: 3

Candidate Starts for Marleymoo\_51:

(Start: 3 @43117 has 9 MA's), (8, 43165), (9, 43189), (16, 43306), (18, 43348), (21, 43429),

Gene: MiaZeal\_49 Start: 39914, Stop: 40234, Start Num: 3

Candidate Starts for MiaZeal\_49:

(Start: 3 @39914 has 9 MA's), (5, 39944), (8, 39962), (9, 39986), (16, 40103), (18, 40145), (21, 40226),

Gene: Minerva\_56 Start: 44848, Stop: 45156, Start Num: 4

Candidate Starts for Minerva\_56:

(Start: 4 @44848 has 21 MA's), (8, 44896), (9, 44920), (14, 44992), (16, 45037), (19, 45118), (21, 45148),

Gene: Nebkiss\_36 Start: 31284, Stop: 31568, Start Num: 2

Candidate Starts for Nebkiss\_36:

(Start: 2 @31284 has 1 MA's), (6, 31326), (7, 31332), (8, 31335), (10, 31362), (13, 31416), (14, 31425), (15, 31437), (20, 31539), (21, 31560),

Gene: Nekros\_48 Start: 42315, Stop: 42641, Start Num: 1

Candidate Starts for Nekros\_48:

(Start: 1 @42315 has 10 MA's), (Start: 4 @42321 has 21 MA's), (8, 42369), (9, 42393), (16, 42510), (18, 42552), (21, 42633),

Gene: Nibley\_44 Start: 38343, Stop: 38663, Start Num: 4

Candidate Starts for Nibley\_44:

(Start: 1 @38337 has 10 MA's), (Start: 4 @38343 has 21 MA's), (8, 38391), (9, 38415), (16, 38532), (18, 38574), (21, 38655),

Gene: NihilNomen\_49 Start: 43536, Stop: 43826, Start Num: 4

Candidate Starts for NihilNomen\_49:

(Start: 4 @43536 has 21 MA's), (5, 43566), (8, 43584), (9, 43608), (14, 43680), (16, 43725), (21, 43818),

Gene: Odette\_50 Start: 42760, Stop: 43068, Start Num: 4

Candidate Starts for Odette\_50:

(Start: 4 @42760 has 21 MA's), (8, 42808), (9, 42832), (14, 42904), (16, 42949), (19, 43030), (21, 43060),

Gene: Omega\_54 Start: 44553, Stop: 44873, Start Num: 4

Candidate Starts for Omega\_54:

(Start: 1 @44547 has 10 MA's), (Start: 4 @44553 has 21 MA's), (8, 44601), (9, 44625), (16, 44742), (18, 44784), (21, 44865),

Gene: Optimus\_55 Start: 44433, Stop: 44741, Start Num: 4

Candidate Starts for Optimus\_55:

(Start: 4 @44433 has 21 MA's), (8, 44481), (9, 44505), (14, 44577), (16, 44622), (19, 44703), (21, 44733),

Gene: Phoebus\_49 Start: 43731, Stop: 44027, Start Num: 1

Candidate Starts for Phoebus\_49:

(Start: 1 @43731 has 10 MA's), (Start: 4 @43737 has 21 MA's), (8, 43785), (9, 43809), (14, 43881), (16, 43926), (21, 44019),

Gene: Porcelain\_48 Start: 39914, Stop: 40234, Start Num: 3

Candidate Starts for Porcelain\_48:

(Start: 3 @39914 has 9 MA's), (5, 39944), (8, 39962), (9, 39986), (16, 40103), (18, 40145), (21, 40226),

Gene: Pound\_52 Start: 45296, Stop: 45604, Start Num: 4

Candidate Starts for Pound\_52:

(Start: 4 @45296 has 21 MA's), (5, 45326), (8, 45344), (9, 45368), (14, 45440), (16, 45485), (19, 45566), (21, 45596),

Gene: Rearden\_44 Start: 39525, Stop: 39845, Start Num: 3

Candidate Starts for Rearden\_44:

(Start: 3 @39525 has 9 MA's), (8, 39573), (9, 39597), (16, 39714), (17, 39729), (18, 39756), (21, 39837),

Gene: Redno2\_48 Start: 40492, Stop: 40812, Start Num: 4

Candidate Starts for Redno2\_48:

(Start: 1 @40486 has 10 MA's), (Start: 4 @40492 has 21 MA's), (8, 40540), (9, 40564), (11, 40618), (14, 40636), (16, 40681), (17, 40696), (18, 40723), (21, 40804),

Gene: Schatzie\_47 Start: 42508, Stop: 42816, Start Num: 4

Candidate Starts for Schatzie\_47:

(Start: 4 @42508 has 21 MA's), (8, 42556), (9, 42580), (14, 42652), (16, 42697), (19, 42778), (21, 42808),

Gene: Shaboozey\_42 Start: 37290, Stop: 37604, Start Num: 4

Candidate Starts for Shaboozey\_42:

(Start: 1 @37284 has 10 MA's), (Start: 4 @37290 has 21 MA's), (8, 37338), (9, 37362), (11, 37416), (12, 37422), (15, 37446), (17, 37494), (18, 37521), (21, 37596),

Gene: Squint\_48 Start: 40033, Stop: 40353, Start Num: 3

Candidate Starts for Squint\_48:

(Start: 3 @40033 has 9 MA's), (5, 40063), (8, 40081), (9, 40105), (16, 40222), (18, 40264), (21, 40345),

Gene: Superphikiman\_49 Start: 40105, Stop: 40425, Start Num: 3

Candidate Starts for Superphikiman\_49:

(Start: 3 @40105 has 9 MA's), (5, 40135), (8, 40153), (9, 40177), (16, 40294), (18, 40336), (21, 40417),

Gene: Thibault\_43 Start: 40678, Stop: 40998, Start Num: 3

Candidate Starts for Thibault\_43:

(Start: 3 @40678 has 9 MA's), (8, 40726), (9, 40750), (16, 40867), (18, 40909), (21, 40990),

Gene: ThreeRngTarjay\_48 Start: 43587, Stop: 43904, Start Num: 4

Candidate Starts for ThreeRngTarjay\_48:

(Start: 4 @43587 has 21 MA's), (8, 43635), (9, 43659), (14, 43731), (16, 43776), (21, 43896),

Gene: Wanda\_56 Start: 43319, Stop: 43615, Start Num: 1

Candidate Starts for Wanda\_56:

(Start: 1 @43319 has 10 MA's), (Start: 4 @43325 has 21 MA's), (8, 43373), (9, 43397), (14, 43469), (16, 43514), (21, 43607),

Gene: Xiaokay\_45 Start: 40354, Stop: 40662, Start Num: 4

Candidate Starts for Xiaokay\_45:

(Start: 4 @40354 has 21 MA's), (5, 40384), (8, 40402), (9, 40426), (14, 40498), (16, 40543), (19, 40624), (21, 40654),

Gene: Yeet\_48 Start: 42740, Stop: 43036, Start Num: 1

Candidate Starts for Yeet\_48:

(Start: 1 @42740 has 10 MA's), (Start: 4 @42746 has 21 MA's), (8, 42794), (9, 42818), (14, 42890), (16, 42935), (21, 43028),

Gene: Zelink\_51 Start: 44531, Stop: 44851, Start Num: 4

Candidate Starts for Zelink\_51:

(Start: 1 @44525 has 10 MA's), (Start: 4 @44531 has 21 MA's), (8, 44579), (9, 44603), (11, 44657), (14, 44675), (16, 44720), (17, 44735), (18, 44762), (21, 44843),