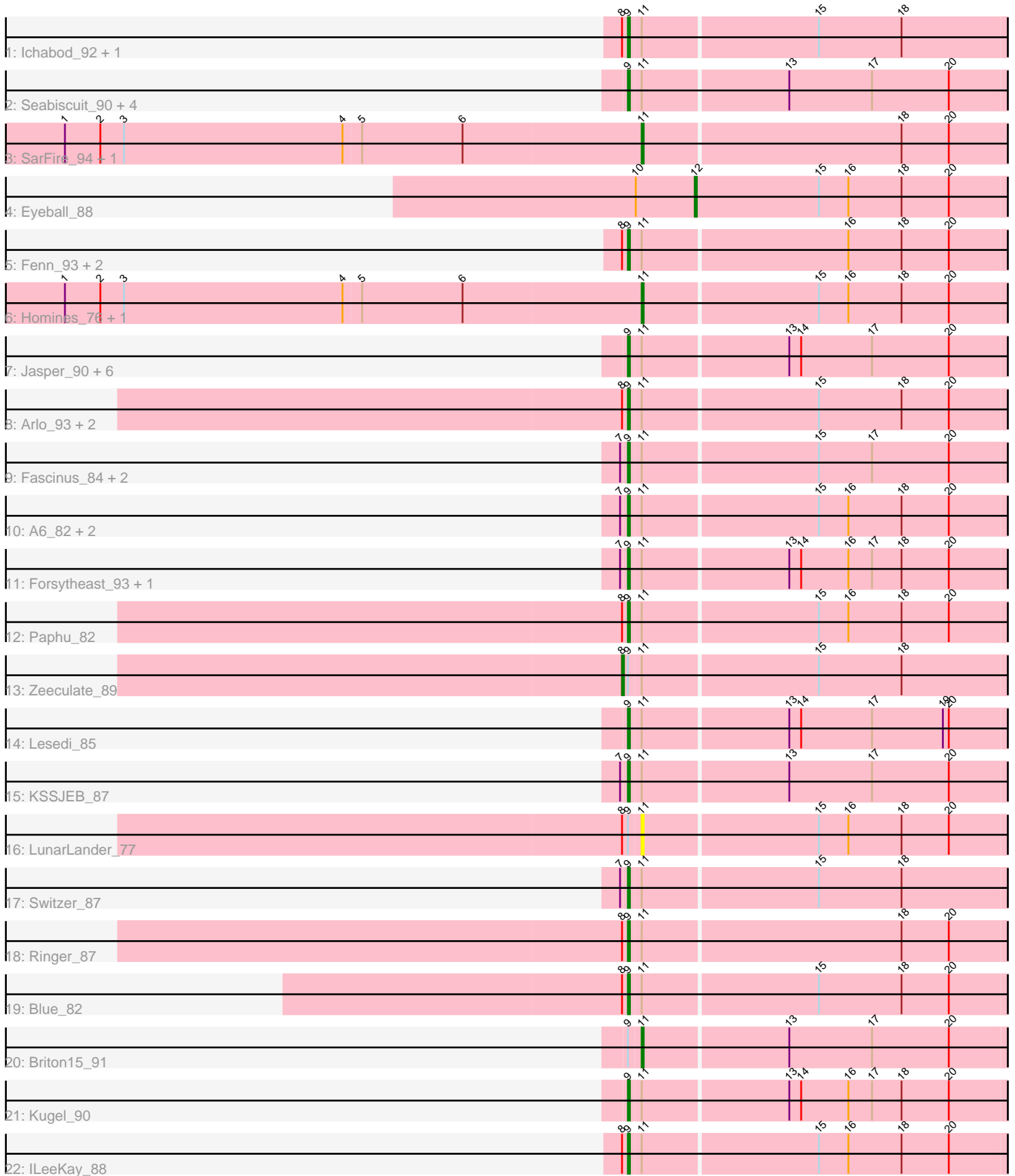


Pham 214408



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 214408 Report

This analysis was run 02/22/25 on database version 588.

Pham number 214408 has 44 members, 3 are drafts.

Phages represented in each track:

- Track 1 : Ichabod\_92, Zephyr\_89
- Track 2 : Seabiscuit\_90, Manatee\_88, U2\_81, McGuire\_88, BeesKnees\_91
- Track 3 : SarFire\_94, Thor\_94
- Track 4 : Eyeball\_88
- Track 5 : Fenn\_93, Naira\_92, Squee\_87
- Track 6 : Homines\_76, Espresso\_84
- Track 7 : Jasper\_90, Dreamboat\_90, Wilkins\_86, Seanderson\_87, Topgun\_85, Teodoridan\_85, Snazzy\_90
- Track 8 : Arlo\_93, Mkhuseleli\_85, Carlyle\_87
- Track 9 : Fascinus\_84, Maroc7\_89, CactusRose\_93
- Track 10 : A6\_82, BK1\_82, Marcell\_80
- Track 11 : Forsytheast\_93, Moose\_92
- Track 12 : Paphu\_82
- Track 13 : Zeeculate\_89
- Track 14 : Lesedi\_85
- Track 15 : KSSJEB\_87
- Track 16 : LunarLander\_77
- Track 17 : Switzer\_87
- Track 18 : Ringer\_87
- Track 19 : Blue\_82
- Track 20 : Briton15\_91
- Track 21 : Kugel\_90
- Track 22 : ILeeKay\_88

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

The start number called the most often in the published annotations is 9, it was called in 34 of the 41 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- A6\_82, Arlo\_93, BK1\_82, BeesKnees\_91, Blue\_82, CactusRose\_93, Carlyle\_87, Dreamboat\_90, Fascinus\_84, Fenn\_93, Forsytheast\_93, ILeeKay\_88, Ichabod\_92, Jasper\_90, KSSJEB\_87, Kugel\_90, Lesedi\_85, Manatee\_88, Marcell\_80, Maroc7\_89, McGuire\_88, Mkhuseleli\_85, Moose\_92, Naira\_92, Paphu\_82, Ringer\_87,

Seabiscuit\_90, Seanderson\_87, Snazzy\_90, Squee\_87, Switzer\_87, Teodoridan\_85, Topgun\_85, U2\_81, Wilkins\_86, Zephyr\_89,

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

- Briton15\_91, LunarLander\_77, Zeeculate\_89,

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

- Espresso\_84, Eyeball\_88, Homines\_76, SarFire\_94, Thor\_94,

### Summary by start number:

Start 8:

- Found in 14 of 44 ( 31.8% ) of genes in pham
- Manual Annotations of this start: 1 of 41
- Called 7.1% of time when present
- Phage (with cluster) where this start called: Zeeculate\_89 (A1),

Start 9:

- Found in 39 of 44 ( 88.6% ) of genes in pham
- Manual Annotations of this start: 34 of 41
- Called 92.3% of time when present
- Phage (with cluster) where this start called: A6\_82 (A1), Arlo\_93 (A1), BK1\_82 (A1), BeesKnees\_91 (A1), Blue\_82 (A1), CactusRose\_93 (A1), Carlyle\_87 (A1), Dreamboat\_90 (A1), Fascinus\_84 (A1), Fenn\_93 (A1), Forsytheast\_93 (A1), ILeeKay\_88 (A1), Ichabod\_92 (A1), Jasper\_90 (A1), KSSJEB\_87 (A1), Kugel\_90 (A1), Lesedi\_85 (A1), Manatee\_88 (A1), Marcell\_80 (A1), Maroc7\_89 (A1), McGuire\_88 (A1), Mkhuseleli\_85 (A1), Moose\_92 (A1), Naira\_92 (A1), Paphu\_82 (A1), Ringer\_87 (A1), Seabiscuit\_90 (A1), Seanderson\_87 (A1), Snazzy\_90 (A1), Squee\_87 (A1), Switzer\_87 (A1), Teodoridan\_85 (A1), Topgun\_85 (A1), U2\_81 (A1), Wilkins\_86 (A1), Zephyr\_89 (A1),

Start 11:

- Found in 43 of 44 ( 97.7% ) of genes in pham
- Manual Annotations of this start: 5 of 41
- Called 14.0% of time when present
- Phage (with cluster) where this start called: Briton15\_91 (A1), Espresso\_84 (A1), Homines\_76 (A1), LunarLander\_77 (A1), SarFire\_94 (A1), Thor\_94 (A1),

Start 12:

- Found in 1 of 44 ( 2.3% ) 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: Eyeball\_88 (A1),

### Summary by clusters:

There is one cluster represented in this pham: A1

Info for manual annotations of cluster A1:

- Start number 8 was manually annotated 1 time for cluster A1.
- Start number 9 was manually annotated 34 times for cluster A1.
- Start number 11 was manually annotated 5 times for cluster A1.
- Start number 12 was manually annotated 1 time for cluster A1.

**Gene Information:**

Gene: A6\_82 Start: 48189, Stop: 48001, Start Num: 9

Candidate Starts for A6\_82:

(7, 48192), (Start: 9 @48189 has 34 MA's), (Start: 11 @48183 has 5 MA's), (15, 48096), (16, 48081), (18, 48054), (20, 48030),

Gene: Arlo\_93 Start: 51829, Stop: 51641, Start Num: 9

Candidate Starts for Arlo\_93:

(Start: 8 @51832 has 1 MA's), (Start: 9 @51829 has 34 MA's), (Start: 11 @51823 has 5 MA's), (15, 51736), (18, 51694), (20, 51670),

Gene: BK1\_82 Start: 48189, Stop: 48001, Start Num: 9

Candidate Starts for BK1\_82:

(7, 48192), (Start: 9 @48189 has 34 MA's), (Start: 11 @48183 has 5 MA's), (15, 48096), (16, 48081), (18, 48054), (20, 48030),

Gene: BeesKnees\_91 Start: 49945, Stop: 49745, Start Num: 9

Candidate Starts for BeesKnees\_91:

(Start: 9 @49945 has 34 MA's), (Start: 11 @49939 has 5 MA's), (13, 49867), (17, 49825), (20, 49786),

Gene: Blue\_82 Start: 49700, Stop: 49512, Start Num: 9

Candidate Starts for Blue\_82:

(Start: 8 @49703 has 1 MA's), (Start: 9 @49700 has 34 MA's), (Start: 11 @49694 has 5 MA's), (15, 49607), (18, 49565), (20, 49541),

Gene: Briton15\_91 Start: 51502, Stop: 51308, Start Num: 11

Candidate Starts for Briton15\_91:

(Start: 9 @51508 has 34 MA's), (Start: 11 @51502 has 5 MA's), (13, 51430), (17, 51388), (20, 51349),

Gene: CactusRose\_93 Start: 51517, Stop: 51317, Start Num: 9

Candidate Starts for CactusRose\_93:

(7, 51520), (Start: 9 @51517 has 34 MA's), (Start: 11 @51511 has 5 MA's), (15, 51424), (17, 51397), (20, 51358),

Gene: Carlyle\_87 Start: 49720, Stop: 49532, Start Num: 9

Candidate Starts for Carlyle\_87:

(Start: 8 @49723 has 1 MA's), (Start: 9 @49720 has 34 MA's), (Start: 11 @49714 has 5 MA's), (15, 49627), (18, 49585), (20, 49561),

Gene: Dreamboat\_90 Start: 49294, Stop: 49094, Start Num: 9

Candidate Starts for Dreamboat\_90:

(Start: 9 @49294 has 34 MA's), (Start: 11 @49288 has 5 MA's), (13, 49216), (14, 49210), (17, 49174), (20, 49135),

Gene: Espresso\_84 Start: 49761, Stop: 49579, Start Num: 11

Candidate Starts for Espresso\_84:

(1, 50052), (2, 50034), (3, 50022), (4, 49911), (5, 49902), (6, 49851), (Start: 11 @49761 has 5 MA's), (15, 49674), (16, 49659), (18, 49632), (20, 49608),

Gene: Eyeball\_88 Start: 49419, Stop: 49577, Start Num: 12  
Candidate Starts for Eyeball\_88:  
(10, 49389), (Start: 12 @49419 has 1 MA's), (15, 49482), (16, 49497), (18, 49524), (20, 49548),

Gene: Fascinus\_84 Start: 51014, Stop: 50814, Start Num: 9  
Candidate Starts for Fascinus\_84:  
(7, 51017), (Start: 9 @51014 has 34 MA's), (Start: 11 @51008 has 5 MA's), (15, 50921), (17, 50894),  
(20, 50855),

Gene: Fenn\_93 Start: 51503, Stop: 51315, Start Num: 9  
Candidate Starts for Fenn\_93:  
(Start: 8 @51506 has 1 MA's), (Start: 9 @51503 has 34 MA's), (Start: 11 @51497 has 5 MA's), (16,  
51395), (18, 51368), (20, 51344),

Gene: Forsytheast\_93 Start: 51556, Stop: 51368, Start Num: 9  
Candidate Starts for Forsytheast\_93:  
(7, 51559), (Start: 9 @51556 has 34 MA's), (Start: 11 @51550 has 5 MA's), (13, 51478), (14, 51472),  
(16, 51448), (17, 51436), (18, 51421), (20, 51397),

Gene: Homines\_76 Start: 45144, Stop: 44962, Start Num: 11  
Candidate Starts for Homines\_76:  
(1, 45435), (2, 45417), (3, 45405), (4, 45294), (5, 45285), (6, 45234), (Start: 11 @45144 has 5 MA's),  
(15, 45057), (16, 45042), (18, 45015), (20, 44991),

Gene: ILeeKay\_88 Start: 49875, Stop: 49687, Start Num: 9  
Candidate Starts for ILeeKay\_88:  
(Start: 8 @49878 has 1 MA's), (Start: 9 @49875 has 34 MA's), (Start: 11 @49869 has 5 MA's), (15,  
49782), (16, 49767), (18, 49740), (20, 49716),

Gene: Ichabod\_92 Start: 51778, Stop: 51590, Start Num: 9  
Candidate Starts for Ichabod\_92:  
(Start: 8 @51781 has 1 MA's), (Start: 9 @51778 has 34 MA's), (Start: 11 @51772 has 5 MA's), (15,  
51685), (18, 51643),

Gene: Jasper\_90 Start: 49180, Stop: 48980, Start Num: 9  
Candidate Starts for Jasper\_90:  
(Start: 9 @49180 has 34 MA's), (Start: 11 @49174 has 5 MA's), (13, 49102), (14, 49096), (17, 49060),  
(20, 49021),

Gene: KSSJEB\_87 Start: 49614, Stop: 49414, Start Num: 9  
Candidate Starts for KSSJEB\_87:  
(7, 49617), (Start: 9 @49614 has 34 MA's), (Start: 11 @49608 has 5 MA's), (13, 49536), (17, 49494),  
(20, 49455),

Gene: Kugel\_90 Start: 50859, Stop: 50671, Start Num: 9  
Candidate Starts for Kugel\_90:  
(Start: 9 @50859 has 34 MA's), (Start: 11 @50853 has 5 MA's), (13, 50781), (14, 50775), (16, 50751),  
(17, 50739), (18, 50724), (20, 50700),

Gene: Lesedi\_85 Start: 49329, Stop: 49141, Start Num: 9  
Candidate Starts for Lesedi\_85:  
(Start: 9 @49329 has 34 MA's), (Start: 11 @49323 has 5 MA's), (13, 49251), (14, 49245), (17, 49209),  
(19, 49173), (20, 49170),

Gene: LunarLander\_77 Start: 47148, Stop: 46966, Start Num: 11

Candidate Starts for LunarLander\_77:

(Start: 8 @47157 has 1 MA's), (Start: 9 @47154 has 34 MA's), (Start: 11 @47148 has 5 MA's), (15, 47061), (16, 47046), (18, 47019), (20, 46995),

Gene: Manatee\_88 Start: 49510, Stop: 49310, Start Num: 9

Candidate Starts for Manatee\_88:

(Start: 9 @49510 has 34 MA's), (Start: 11 @49504 has 5 MA's), (13, 49432), (17, 49390), (20, 49351),

Gene: Marcell\_80 Start: 48034, Stop: 47846, Start Num: 9

Candidate Starts for Marcell\_80:

(7, 48037), (Start: 9 @48034 has 34 MA's), (Start: 11 @48028 has 5 MA's), (15, 47941), (16, 47926), (18, 47899), (20, 47875),

Gene: Maroc7\_89 Start: 52233, Stop: 52033, Start Num: 9

Candidate Starts for Maroc7\_89:

(7, 52236), (Start: 9 @52233 has 34 MA's), (Start: 11 @52227 has 5 MA's), (15, 52140), (17, 52113), (20, 52074),

Gene: McGuire\_88 Start: 49744, Stop: 49544, Start Num: 9

Candidate Starts for McGuire\_88:

(Start: 9 @49744 has 34 MA's), (Start: 11 @49738 has 5 MA's), (13, 49666), (17, 49624), (20, 49585),

Gene: Mkhuseli\_85 Start: 47970, Stop: 47782, Start Num: 9

Candidate Starts for Mkhuseli\_85:

(Start: 8 @47973 has 1 MA's), (Start: 9 @47970 has 34 MA's), (Start: 11 @47964 has 5 MA's), (15, 47877), (18, 47835), (20, 47811),

Gene: Moose\_92 Start: 51556, Stop: 51368, Start Num: 9

Candidate Starts for Moose\_92:

(7, 51559), (Start: 9 @51556 has 34 MA's), (Start: 11 @51550 has 5 MA's), (13, 51478), (14, 51472), (16, 51448), (17, 51436), (18, 51421), (20, 51397),

Gene: Naira\_92 Start: 51635, Stop: 51447, Start Num: 9

Candidate Starts for Naira\_92:

(Start: 8 @51638 has 1 MA's), (Start: 9 @51635 has 34 MA's), (Start: 11 @51629 has 5 MA's), (16, 51527), (18, 51500), (20, 51476),

Gene: Paphu\_82 Start: 48282, Stop: 48094, Start Num: 9

Candidate Starts for Paphu\_82:

(Start: 8 @48285 has 1 MA's), (Start: 9 @48282 has 34 MA's), (Start: 11 @48276 has 5 MA's), (15, 48189), (16, 48174), (18, 48147), (20, 48123),

Gene: Ringer\_87 Start: 50657, Stop: 50469, Start Num: 9

Candidate Starts for Ringer\_87:

(Start: 8 @50660 has 1 MA's), (Start: 9 @50657 has 34 MA's), (Start: 11 @50651 has 5 MA's), (18, 50522), (20, 50498),

Gene: SarFire\_94 Start: 52388, Stop: 52194, Start Num: 11

Candidate Starts for SarFire\_94:

(1, 52679), (2, 52661), (3, 52649), (4, 52538), (5, 52529), (6, 52478), (Start: 11 @52388 has 5 MA's), (18, 52259), (20, 52235),

Gene: Seabiscuit\_90 Start: 49976, Stop: 49776, Start Num: 9  
Candidate Starts for Seabiscuit\_90:  
(Start: 9 @49976 has 34 MA's), (Start: 11 @49970 has 5 MA's), (13, 49898), (17, 49856), (20, 49817),

Gene: Seanderson\_87 Start: 51872, Stop: 51684, Start Num: 9  
Candidate Starts for Seanderson\_87:  
(Start: 9 @51872 has 34 MA's), (Start: 11 @51866 has 5 MA's), (13, 51794), (14, 51788), (17, 51752),  
(20, 51713),

Gene: Snazzy\_90 Start: 51084, Stop: 50884, Start Num: 9  
Candidate Starts for Snazzy\_90:  
(Start: 9 @51084 has 34 MA's), (Start: 11 @51078 has 5 MA's), (13, 51006), (14, 51000), (17, 50964),  
(20, 50925),

Gene: Squee\_87 Start: 50007, Stop: 49819, Start Num: 9  
Candidate Starts for Squee\_87:  
(Start: 8 @50010 has 1 MA's), (Start: 9 @50007 has 34 MA's), (Start: 11 @50001 has 5 MA's), (16,  
49899), (18, 49872), (20, 49848),

Gene: Switzer\_87 Start: 50760, Stop: 50560, Start Num: 9  
Candidate Starts for Switzer\_87:  
(7, 50763), (Start: 9 @50760 has 34 MA's), (Start: 11 @50754 has 5 MA's), (15, 50667), (18, 50625),

Gene: Teodoridan\_85 Start: 48171, Stop: 47971, Start Num: 9  
Candidate Starts for Teodoridan\_85:  
(Start: 9 @48171 has 34 MA's), (Start: 11 @48165 has 5 MA's), (13, 48093), (14, 48087), (17, 48051),  
(20, 48012),

Gene: Thor\_94 Start: 51746, Stop: 51552, Start Num: 11  
Candidate Starts for Thor\_94:  
(1, 52037), (2, 52019), (3, 52007), (4, 51896), (5, 51887), (6, 51836), (Start: 11 @51746 has 5 MA's),  
(18, 51617), (20, 51593),

Gene: Topgun\_85 Start: 48489, Stop: 48289, Start Num: 9  
Candidate Starts for Topgun\_85:  
(Start: 9 @48489 has 34 MA's), (Start: 11 @48483 has 5 MA's), (13, 48411), (14, 48405), (17, 48369),  
(20, 48330),

Gene: U2\_81 Start: 50965, Stop: 50765, Start Num: 9  
Candidate Starts for U2\_81:  
(Start: 9 @50965 has 34 MA's), (Start: 11 @50959 has 5 MA's), (13, 50887), (17, 50845), (20, 50806),

Gene: Wilkins\_86 Start: 48419, Stop: 48219, Start Num: 9  
Candidate Starts for Wilkins\_86:  
(Start: 9 @48419 has 34 MA's), (Start: 11 @48413 has 5 MA's), (13, 48341), (14, 48335), (17, 48299),  
(20, 48260),

Gene: Zeeculate\_89 Start: 52732, Stop: 52541, Start Num: 8  
Candidate Starts for Zeeculate\_89:  
(Start: 8 @52732 has 1 MA's), (Start: 9 @52729 has 34 MA's), (Start: 11 @52723 has 5 MA's), (15,  
52636), (18, 52594),

Gene: Zephyr\_89 Start: 51170, Stop: 50982, Start Num: 9

Candidate Starts for Zephyr\_89:

(Start: 8 @51173 has 1 MA's), (Start: 9 @51170 has 34 MA's), (Start: 11 @51164 has 5 MA's), (15, 51077), (18, 51035),