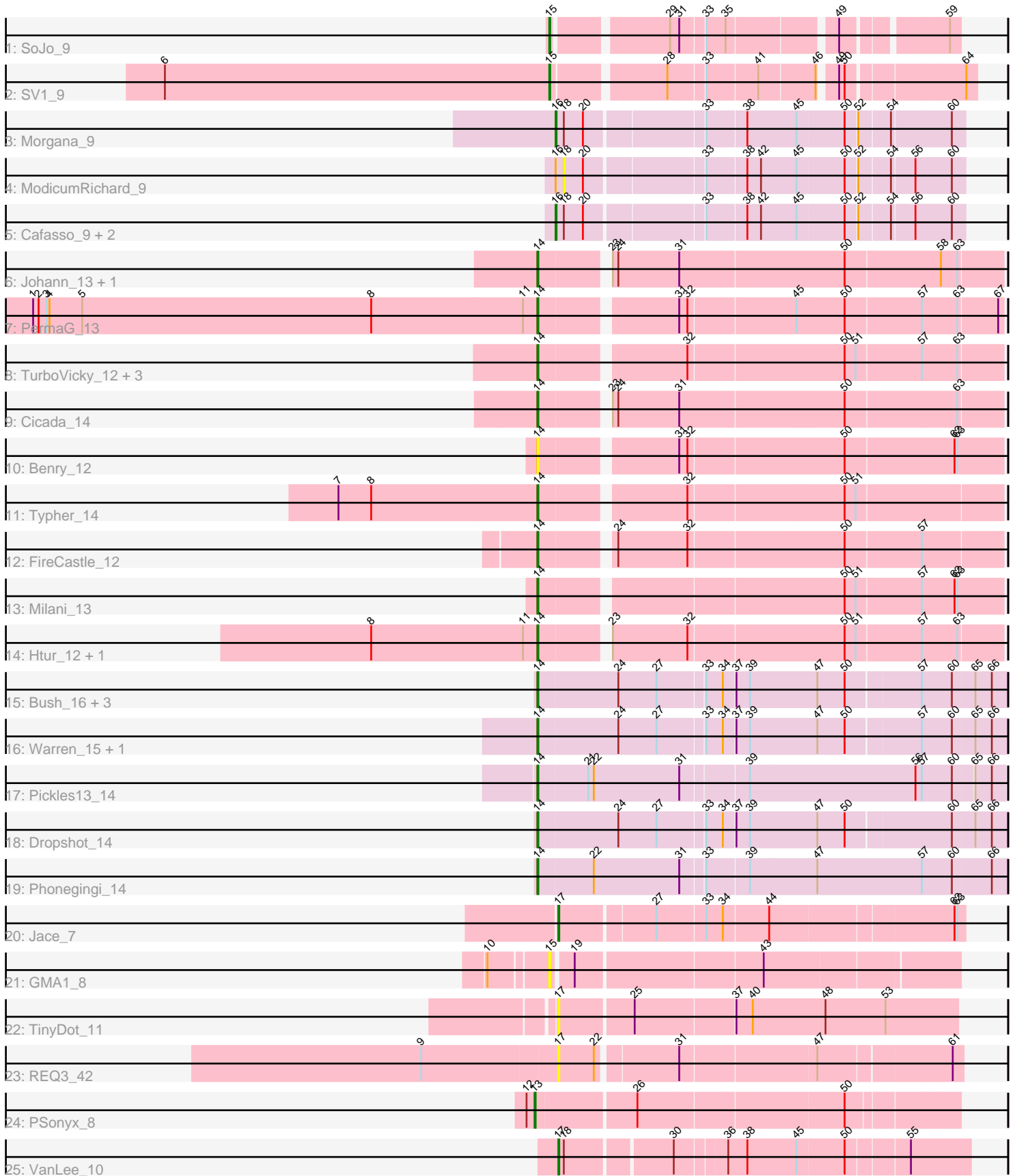


# Pham 162029



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 162029 Report

This analysis was run 04/28/24 on database version 559.

Pham number 162029 has 36 members, 8 are drafts.

Phages represented in each track:

- Track 1 : SoJo\_9
- Track 2 : SV1\_9
- Track 3 : Morgana\_9
- Track 4 : ModicumRichard\_9
- Track 5 : Cafasso\_9, Aleemily\_9, ObLaDi\_9
- Track 6 : Johann\_13, Goodman\_13
- Track 7 : PermaG\_13
- Track 8 : TurboVicky\_12, SBlackberry\_12, Jera\_13, Zanella\_12
- Track 9 : Cicada\_14
- Track 10 : Benry\_12
- Track 11 : Typher\_14
- Track 12 : FireCastle\_12
- Track 13 : Milani\_13
- Track 14 : Htur\_12, Rasovi\_12
- Track 15 : Bush\_16, MenE\_18, Antuna\_15, Appa\_14
- Track 16 : Warren\_15, Blett\_15
- Track 17 : Pickles13\_14
- Track 18 : Dropshot\_14
- Track 19 : Phonegingi\_14
- Track 20 : Jace\_7
- Track 21 : GMA1\_8
- Track 22 : TinyDot\_11
- Track 23 : REQ3\_42
- Track 24 : PSonyx\_8
- Track 25 : VanLee\_10

### ***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 19 of the 28 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Antuna\_15, Appa\_14, Benry\_12, Blett\_15, Bush\_16, Cicada\_14, Dropshot\_14, FireCastle\_12, Goodman\_13, Htur\_12, Jera\_13, Johann\_13, MenE\_18, Milani\_13,

PermaG\_13, Phonegingi\_14, Pickles13\_14, Rasovi\_12, SBlackberry\_12, TurboVicky\_12, Typher\_14, Warren\_15, Zanella\_12,

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

- 

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

• Aleemily\_9, Cafasso\_9, GMA1\_8, Jace\_7, ModicumRichard\_9, Morgana\_9, ObLaDi\_9, PSonyx\_8, REQ3\_42, SV1\_9, SoJo\_9, TinyDot\_11, VanLee\_10,

### Summary by start number:

Start 13:

- Found in 1 of 36 ( 2.8% ) of genes in pham
- Manual Annotations of this start: 1 of 28
- Called 100.0% of time when present
- Phage (with cluster) where this start called: PSonyx\_8 (singleton),

Start 14:

- Found in 23 of 36 ( 63.9% ) of genes in pham
- Manual Annotations of this start: 19 of 28
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Antuna\_15 (GA), Appa\_14 (GA), Benry\_12 (EJ), Blett\_15 (GA), Bush\_16 (GA), Cicada\_14 (EJ), Dropshot\_14 (GA), FireCastle\_12 (EJ), Goodman\_13 (EJ), Htur\_12 (EJ), Jera\_13 (EJ), Johann\_13 (EJ), MenE\_18 (GA), Milani\_13 (EJ), PermaG\_13 (EJ), Phonegingi\_14 (GA), Pickles13\_14 (GA), Rasovi\_12 (EJ), SBlackberry\_12 (EJ), TurboVicky\_12 (EJ), Typher\_14 (EJ), Warren\_15 (GA), Zanella\_12 (EJ),

Start 15:

- Found in 3 of 36 ( 8.3% ) of genes in pham
- Manual Annotations of this start: 2 of 28
- Called 100.0% of time when present
- Phage (with cluster) where this start called: GMA1\_8 (singleton), SV1\_9 (BC1), SoJo\_9 (BC1),

Start 16:

- Found in 5 of 36 ( 13.9% ) of genes in pham
- Manual Annotations of this start: 4 of 28
- Called 80.0% of time when present
- Phage (with cluster) where this start called: Aleemily\_9 (DZ), Cafasso\_9 (DZ), Morgana\_9 (DZ), ObLaDi\_9 (DZ),

Start 17:

- Found in 4 of 36 ( 11.1% ) of genes in pham
- Manual Annotations of this start: 2 of 28
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Jace\_7 (singleton), REQ3\_42 (singleton), TinyDot\_11 (singleton), VanLee\_10 (singleton),

Start 18:

- Found in 6 of 36 ( 16.7% ) of genes in pham
- No Manual Annotations of this start.

- Called 16.7% of time when present
- Phage (with cluster) where this start called: ModicumRichard\_9 (DZ),

### **Summary by clusters:**

There are 5 clusters represented in this pham: singleton, DZ, BC1, GA, EJ,

Info for manual annotations of cluster BC1:

- Start number 15 was manually annotated 2 times for cluster BC1.

Info for manual annotations of cluster DZ:

- Start number 16 was manually annotated 4 times for cluster DZ.

Info for manual annotations of cluster EJ:

- Start number 14 was manually annotated 12 times for cluster EJ.

Info for manual annotations of cluster GA:

- Start number 14 was manually annotated 7 times for cluster GA.

### **Gene Information:**

Gene: Aleemily\_9 Start: 7322, Stop: 7741, Start Num: 16

Candidate Starts for Aleemily\_9:

(Start: 16 @7322 has 4 MA's), (18, 7331), (20, 7352), (33, 7472), (38, 7514), (42, 7529), (45, 7568), (50, 7619), (52, 7631), (54, 7664), (56, 7688), (60, 7727),

Gene: Antuna\_15 Start: 8492, Stop: 8986, Start Num: 14

Candidate Starts for Antuna\_15:

(Start: 14 @8492 has 19 MA's), (24, 8579), (27, 8621), (33, 8669), (34, 8687), (37, 8699), (39, 8714), (47, 8786), (50, 8816), (57, 8894), (60, 8927), (65, 8951), (66, 8969),

Gene: Appa\_14 Start: 8354, Stop: 8848, Start Num: 14

Candidate Starts for Appa\_14:

(Start: 14 @8354 has 19 MA's), (24, 8441), (27, 8483), (33, 8531), (34, 8549), (37, 8561), (39, 8576), (47, 8648), (50, 8678), (57, 8756), (60, 8789), (65, 8813), (66, 8831),

Gene: Benry\_12 Start: 8598, Stop: 9080, Start Num: 14

Candidate Starts for Benry\_12:

(Start: 14 @8598 has 19 MA's), (31, 8736), (32, 8745), (50, 8910), (62, 9027), (63, 9030),

Gene: Blett\_15 Start: 8507, Stop: 9001, Start Num: 14

Candidate Starts for Blett\_15:

(Start: 14 @8507 has 19 MA's), (24, 8594), (27, 8636), (33, 8684), (34, 8702), (37, 8714), (39, 8729), (47, 8801), (50, 8831), (57, 8909), (60, 8942), (65, 8966), (66, 8984),

Gene: Bush\_16 Start: 8488, Stop: 8982, Start Num: 14

Candidate Starts for Bush\_16:

(Start: 14 @8488 has 19 MA's), (24, 8575), (27, 8617), (33, 8665), (34, 8683), (37, 8695), (39, 8710), (47, 8782), (50, 8812), (57, 8890), (60, 8923), (65, 8947), (66, 8965),

Gene: Cafasso\_9 Start: 7322, Stop: 7741, Start Num: 16

Candidate Starts for Cafasso\_9:

(Start: 16 @7322 has 4 MA's), (18, 7331), (20, 7352), (33, 7472), (38, 7514), (42, 7529), (45, 7568), (50, 7619), (52, 7631), (54, 7664), (56, 7688), (60, 7727),

Gene: Cicada\_14 Start: 10667, Stop: 11149, Start Num: 14

Candidate Starts for Cicada\_14:

(Start: 14 @10667 has 19 MA's), (23, 10733), (24, 10739), (31, 10805), (50, 10982), (63, 11102),

Gene: Dropshot\_14 Start: 8354, Stop: 8848, Start Num: 14

Candidate Starts for Dropshot\_14:

(Start: 14 @8354 has 19 MA's), (24, 8441), (27, 8483), (33, 8531), (34, 8549), (37, 8561), (39, 8576), (47, 8648), (50, 8678), (60, 8789), (65, 8813), (66, 8831),

Gene: FireCastle\_12 Start: 10331, Stop: 10810, Start Num: 14

Candidate Starts for FireCastle\_12:

(Start: 14 @10331 has 19 MA's), (24, 10403), (32, 10478), (50, 10643), (57, 10724),

Gene: GMA1\_8 Start: 6454, Stop: 6870, Start Num: 15

Candidate Starts for GMA1\_8:

(10, 6400), (Start: 15 @6454 has 2 MA's), (19, 6475), (43, 6667),

Gene: Goodman\_13 Start: 10579, Stop: 11061, Start Num: 14

Candidate Starts for Goodman\_13:

(Start: 14 @10579 has 19 MA's), (23, 10645), (24, 10651), (31, 10717), (50, 10894), (58, 10996), (63, 11014),

Gene: Htur\_12 Start: 10585, Stop: 11064, Start Num: 14

Candidate Starts for Htur\_12:

(8, 10405), (11, 10570), (Start: 14 @10585 has 19 MA's), (23, 10651), (32, 10732), (50, 10897), (51, 10909), (57, 10978), (63, 11017),

Gene: Jace\_7 Start: 6635, Stop: 7051, Start Num: 17

Candidate Starts for Jace\_7:

(Start: 17 @6635 has 2 MA's), (27, 6734), (33, 6782), (34, 6800), (44, 6848), (62, 7040), (63, 7043),

Gene: Jera\_13 Start: 9661, Stop: 10140, Start Num: 14

Candidate Starts for Jera\_13:

(Start: 14 @9661 has 19 MA's), (32, 9808), (50, 9973), (51, 9985), (57, 10054), (63, 10093),

Gene: Johann\_13 Start: 10579, Stop: 11061, Start Num: 14

Candidate Starts for Johann\_13:

(Start: 14 @10579 has 19 MA's), (23, 10645), (24, 10651), (31, 10717), (50, 10894), (58, 10996), (63, 11014),

Gene: MenE\_18 Start: 8622, Stop: 9116, Start Num: 14

Candidate Starts for MenE\_18:

(Start: 14 @8622 has 19 MA's), (24, 8709), (27, 8751), (33, 8799), (34, 8817), (37, 8829), (39, 8844), (47, 8916), (50, 8946), (57, 9024), (60, 9057), (65, 9081), (66, 9099),

Gene: Milani\_13 Start: 9257, Stop: 9739, Start Num: 14

Candidate Starts for Milani\_13:

(Start: 14 @9257 has 19 MA's), (50, 9569), (51, 9581), (57, 9650), (62, 9686), (63, 9689),

Gene: ModicumRichard\_9 Start: 7331, Stop: 7741, Start Num: 18

Candidate Starts for ModicumRichard\_9:

(Start: 16 @7322 has 4 MA's), (18, 7331), (20, 7352), (33, 7472), (38, 7514), (42, 7529), (45, 7568), (50, 7619), (52, 7631), (54, 7664), (56, 7688), (60, 7727),

Gene: Morgana\_9 Start: 7326, Stop: 7745, Start Num: 16

Candidate Starts for Morgana\_9:

(Start: 16 @7326 has 4 MA's), (18, 7335), (20, 7356), (33, 7476), (38, 7518), (45, 7572), (50, 7623), (52, 7635), (54, 7668), (60, 7731),

Gene: ObLaDi\_9 Start: 7322, Stop: 7741, Start Num: 16

Candidate Starts for ObLaDi\_9:

(Start: 16 @7322 has 4 MA's), (18, 7331), (20, 7352), (33, 7472), (38, 7514), (42, 7529), (45, 7568), (50, 7619), (52, 7631), (54, 7664), (56, 7688), (60, 7727),

Gene: PSonyx\_8 Start: 7275, Stop: 7712, Start Num: 13

Candidate Starts for PSonyx\_8:

(12, 7266), (Start: 13 @7275 has 1 MA's), (26, 7380), (50, 7596),

Gene: PermaG\_13 Start: 10645, Stop: 11124, Start Num: 14

Candidate Starts for PermaG\_13:

(1, 10093), (2, 10099), (3, 10108), (4, 10111), (5, 10147), (8, 10465), (11, 10630), (Start: 14 @10645 has 19 MA's), (31, 10783), (32, 10792), (45, 10906), (50, 10957), (57, 11038), (63, 11077), (67, 11119),

Gene: Phonegingi\_14 Start: 8348, Stop: 8848, Start Num: 14

Candidate Starts for Phonegingi\_14:

(Start: 14 @8348 has 19 MA's), (22, 8408), (31, 8501), (33, 8525), (39, 8570), (47, 8642), (57, 8756), (60, 8789), (66, 8831),

Gene: Pickles13\_14 Start: 8518, Stop: 9012, Start Num: 14

Candidate Starts for Pickles13\_14:

(Start: 14 @8518 has 19 MA's), (21, 8572), (22, 8578), (31, 8671), (39, 8740), (56, 8920), (57, 8926), (60, 8959), (65, 8980), (66, 8998),

Gene: REQ3\_42 Start: 23499, Stop: 23909, Start Num: 17

Candidate Starts for REQ3\_42:

(9, 23352), (Start: 17 @23499 has 2 MA's), (22, 23538), (31, 23619), (47, 23760), (61, 23898),

Gene: Rasovi\_12 Start: 10585, Stop: 11064, Start Num: 14

Candidate Starts for Rasovi\_12:

(8, 10405), (11, 10570), (Start: 14 @10585 has 19 MA's), (23, 10651), (32, 10732), (50, 10897), (51, 10909), (57, 10978), (63, 11017),

Gene: SBlackberry\_12 Start: 10420, Stop: 10899, Start Num: 14

Candidate Starts for SBlackberry\_12:

(Start: 14 @10420 has 19 MA's), (32, 10567), (50, 10732), (51, 10744), (57, 10813), (63, 10852),

Gene: SV1\_9 Start: 7311, Stop: 7727, Start Num: 15

Candidate Starts for SV1\_9:

(6, 6888), (Start: 15 @7311 has 2 MA's), (28, 7425), (33, 7461), (41, 7515), (46, 7575), (49, 7590), (50, 7596), (64, 7716),

Gene: SoJo\_9 Start: 7360, Stop: 7749, Start Num: 15  
Candidate Starts for SoJo\_9:  
(Start: 15 @7360 has 2 MA's), (29, 7474), (31, 7483), (33, 7507), (35, 7528), (49, 7636), (59, 7738),

Gene: TinyDot\_11 Start: 7216, Stop: 7635, Start Num: 17  
Candidate Starts for TinyDot\_11:  
(Start: 17 @7216 has 2 MA's), (25, 7294), (37, 7396), (40, 7414), (48, 7492), (53, 7558),

Gene: TurboVicky\_12 Start: 10414, Stop: 10893, Start Num: 14  
Candidate Starts for TurboVicky\_12:  
(Start: 14 @10414 has 19 MA's), (32, 10561), (50, 10726), (51, 10738), (57, 10807), (63, 10846),

Gene: Typher\_14 Start: 10548, Stop: 11027, Start Num: 14  
Candidate Starts for Typher\_14:  
(7, 10332), (8, 10368), (Start: 14 @10548 has 19 MA's), (32, 10695), (50, 10860), (51, 10872),

Gene: VanLee\_10 Start: 7200, Stop: 7619, Start Num: 17  
Candidate Starts for VanLee\_10:  
(Start: 17 @7200 has 2 MA's), (18, 7206), (30, 7314), (36, 7365), (38, 7386), (45, 7440), (50, 7491),  
(55, 7554),

Gene: Warren\_15 Start: 8551, Stop: 9045, Start Num: 14  
Candidate Starts for Warren\_15:  
(Start: 14 @8551 has 19 MA's), (24, 8638), (27, 8680), (33, 8728), (34, 8746), (37, 8758), (39, 8773),  
(47, 8845), (50, 8875), (57, 8953), (60, 8986), (65, 9010), (66, 9028),

Gene: Zanella\_12 Start: 10417, Stop: 10896, Start Num: 14  
Candidate Starts for Zanella\_12:  
(Start: 14 @10417 has 19 MA's), (32, 10564), (50, 10729), (51, 10741), (57, 10810), (63, 10849),