WAO 2001 NOTES
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Although this was an Accelerator Operations workshop, some good ideas and concepts were aired.

On the whole everyone agreed Operators "Responsibility with Authority" is necessary in a busy control room atmosphere whereas the operators are charged with keeping the machine running. The operators control all noise, congestion, user hand-on, etc.

Some concepts being used are that operators are mixed in talent, from PHD to technician on a 50-50 basis. Some speakers said this works very well. During a 40-hour week, operators are in the control room 50% and performing other tasks (maintenance, training, assisting other groups) the other 50%. Note, this works well if you have the staff. Operator skills from Jack-of-all-trades to specialists with a 50-50 mix seemed preferred by most workshop attendees.

The majority of Lab speakers agreed that On The Job Training was preferred over formal training. This was not money/time driven but they said you get better-qualified operators in the end.

The speaker from Jefferson Lab (Crew Chief over Operators) noted that his 15-year experience with shift work was the operators made their own shift hours depending on the type, length, and complexity of the experiment. This ranged from 4 hour shifts to 12 hour shifts, 2 days on, 2 days off, 3 days on, 7 days on, 7 days off etc. He also noted that this approach raised productivity as well as moral. Most other labs seemed to prefer 2 days on, 2 days off, 3 days on with 8 hour shifts and a rotation cycle of no more that 3 weeks (if rotation was necessary). A minimum of 1-hour overlap between shift changes seemed ample time for verbal exchanges, E-log explanations etc.

TRIUMF lab includes a maintenance e-log to their Detector/operations e-log which I think would be useful here. Example, Joe Hanson turning on/off pumps, fixing pipes, construction work, etc. With daily entries, this could be very useful in troubleshooting the Interferometer operation.

Brookhaven Lab has their e-log linked to e-mail. When an entry is made you can have it e-mailed automatically to the person that has vested interest (FYI) or where speciality help is needed.

Considering our infancy in control room operations, I believe we're headed in the right direction. However, there are some things I believe need to be addressed and/or implemented in the very near future.

1) Make Operator training a priority starting ASAP
2) Up date electronic checklist for data trending and web access
3) Complete the installation and calibration of PEM systems
4) Add a maintenance e-log
5) Link e-log to e-mail
6) Up date EPIC graphic displays for LLO not LHO
7) Continue to install Stan's alarm software
8) Integrate crucial facility control data into CDS
9) Continue making Interferometer diagrams (Joe Kovalik has started these already)
10) Develop HELP pages (How to.....)
11) Provide crucial staff with a high speed computer connection from home, mainly to view the EPIC graphics