Readiness of Laser and LED system

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CEA/IRFU - Saclay

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Laser, LED and DAQ

Laser and DAQ

System is ready

- Hardware:
  - Spy-box installed: see Inna Kucher's talk, `https://indico.cern.ch/event/364607/`
    - Showed that intervention on spy-box for upgrade studies are transparent to the data taking
  - Fibres cleaned-up
  - Both lasers already in service
  - LED: no change
  - All PC of laser barrack changed. Hot spare of laser supervisor PC remains to be changed
    - Every PC is now rack-mounted.
- Software:
  - Support for second Photonics laser in place and working
  - Migration to TCDS commissioned.

Solved issues and planned interventions

Solved issues

- Water leakage on chiller of Photonics I (DP2-1).
  - Chiller of Photonics II is of a different model and it looks more solid.
- Instability of Photonics I (DP2-1) fixed end of Sept. 2014
  - Was due to a bad contact on the power supply.

To do

- Matacq data used to be on a dedicated disk
  - We'd like to adopt the same strategy for Run 2. To check with system administrators.
- Laser supervisor spare PC to be changed.
- Green laser must has more or less done its specified lifetime (10,000 hours)
  - Problem might occur during 2015
  - Anticipate and purchase a new laser?
- Check that amplitude is fine on every region after the cleaning.

Data processing: the laser monitoring farm

Data processing: status

Status

- Monitoring farm will stay in P5.
- DAQ2 migration commissioned
- Change of PCs planned, still to be done.
- Automatic Handling of DAQ CMSSW release change broken after LS1 DAQ upgrade.
  - Being addressed with DAQ system administrators.
- O2O to be commissioned.
- Documentation being improved
  - Troubleshooting Twiki page added.

Data processing: possible improvements

Weaknesses

- Issue with lags on disk response during last MWGR
  - Delaying (or blocking) the data streaming.
  - Not clear how this can be improved and if the PC renewable will change anything
- Handling of disk space
  - Most problems were following an accumulation of data, following to an interruption of data processing

Conclusion

- System is ready
- Chain of to application of correction in prompt RECO to be re-commissioned
- Identified few points that could be improved.
- Green laser expected to be close to the end of life