

Report from Advanced  
Interferometer Configurations  
WG

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# Advanced LIGO highlights

- Glasgow-10m, CalTech-40m & Japanese RSE experiments are all in progress
- Initial results from full quantum analysis of RF readout-> sensitivity NOT better than DC readout
  - if this is proved correct technical difficulties with RF readout point to the choice of DC readout
- Polarization DC readout?
  - Birefringence is there with sapphire (stable?)
  - Used at ANU, proposed for test in Japan

# LIGO-III topics

- “White light cavity” interferometer proposal
  - initial investigation by Stacy Wise at UF
- QND methods proposed (tests too)
- PR-Michelson squeezing result at ANU
- LIGO III “MUST” have a new low-power sensing scheme to allow reduced thermal noise through cooling -> focus of an AIC workshop at next LSC.