

# AIC-QN WG Parallel Session

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LVC - Pasadena

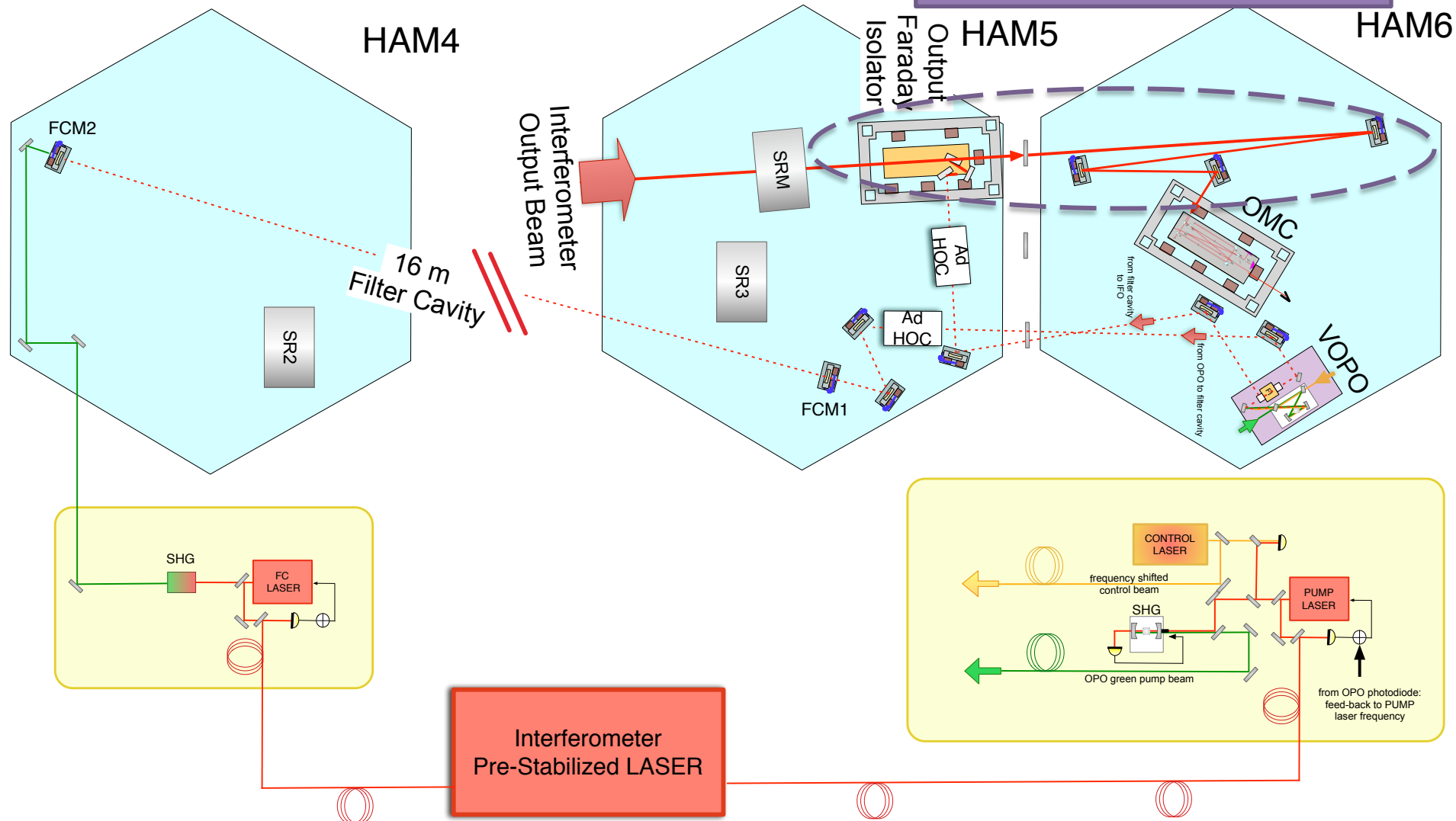
March 17, 2015

# This AIC/QNWWG session

- ✧ Focused on near term upgrades  
(Voyager/Explorer R&D discussed yesterday in Joint Instrument Science session)
- ✧ Work is ramping up to be ready for upgrading advanced detectors:
  - ✧ Squeezed light
  - ✧ Low loss readout

# aLIGO+ (Pre) Conceptual Design

Re-design of path  
SRM—OMC  
(mode matching, scattering)



# Agenda

## AIC

- ✧ 14:05 **Dooley K**, Lessons from 3+ years of squeezing at GEO600
- ✧ 14:25 **Grote H**, Low noise electronics
- ✧ 14:45 **Perreca A /Brooks A / Fulda P**, Active Wavefront Control
- ✧ 15:10 **Adhikari R**, Modern control update
- ✧ 15:25 **Steinlechner S**, Update on the Glasgow Sagnac Speedmeter Experiment
- 15:40 ----- Break -----

## QNWG

- ✧ 16:00 **Mansell G**, Squeezed light generation using an in vacuum OPO
- ✧ 16:20 **Oelker E**, Frequency dependent squeezing
- ✧ 16:40 **Baune C**, Frequency upconversion of squeezed light
- ✧ 17:00 **Singh R**, Radiation pressure
- ✧ 17:20 **Khalili F**, Upscaling of traditional and intracavity-readout topologies of gravitational-wave detectors

# GWADW parallel workshops: input for topics!

- ✧ **Thermal Noise and Materials, Coatings, Optics, Cryogenics:**  
I. Martin (Glasgow), M. Punturo (Perugia), K. Yamamoto (ICRR)
- ✧ **Controls:**  
D. Coyne (Caltech), F. Matichard (MIT)
- ✧ **Gravity Gradients and Low Frequency:**  
J. Harms (INFN Pisa), V. Mandic (Minnesota)
- ✧ **Topologies and Squeezing**  
L. Barsotti (MIT), H. Grote (AEI)