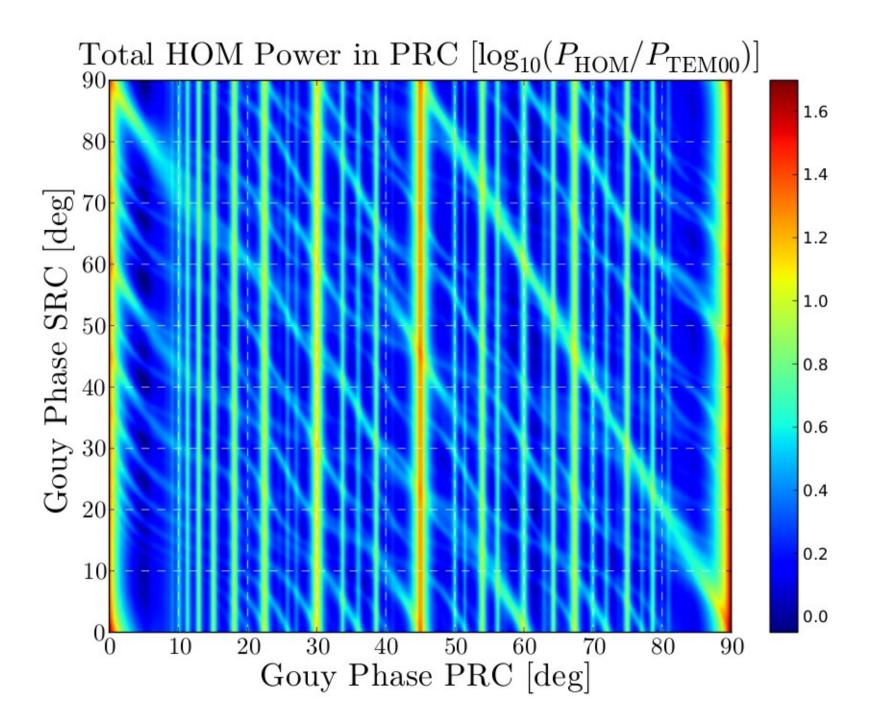
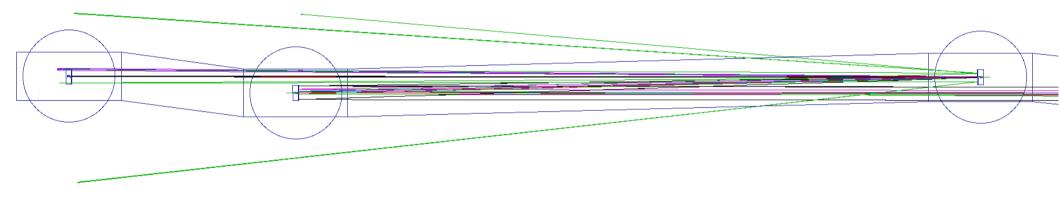
### Recent Progress in the Main Interferometer Subsystem

- MIF Design Document
- Recycling Cavity Gouy Phase Optimization
  - Is 20 deg really good?
  - For PRC closer to 90 deg is better for arm WFS signals
  - WFS signal separation (Michimura)
- Finalizing optical layout
  - Non-sequential ray tracing
  - Optimize the ITM/BS wedge angles
- iLIGO TMs for iKAGRA?
  - Wedge angle is too different
  - Re-polish the AR surface ?



# Non-sequential ray tracing for stray beam tracking



### Milestones

## From April 2012 to July 2012

#### **OMC Initial Design:**

- conceptual design exists
- ATC ?

#### Green Lock Design:

• Revise Tatsumi-design

List up necessary analog electronics