

**SENSING NOISE -
LASERS AND OPTICS
LSC 3 MEETING
AUGUST 13-15, 1998
ERIC GUSTAFSON (STANFORD)**

LIGO-G980113-06-M

At the Last Meeting of the LASERS & OPTICS WORKING Group

1. Create a Homepage
2. Make a MATLAB Thermal Model of Interferometers
3. Write Section of Write Paper

LASERS AND OPTICS WORKING GROUP

Purpose

History

PEOPLE

MEETINGS

OVERHEADS

WHITE
PAPER

Thermal
Model

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WHITE PAPER

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4. Core Optics
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8. Photodiodes
9. Lasers
10. Conclusions & Recommendations

Thermal Model

LIGO I - Ron Beausoleil

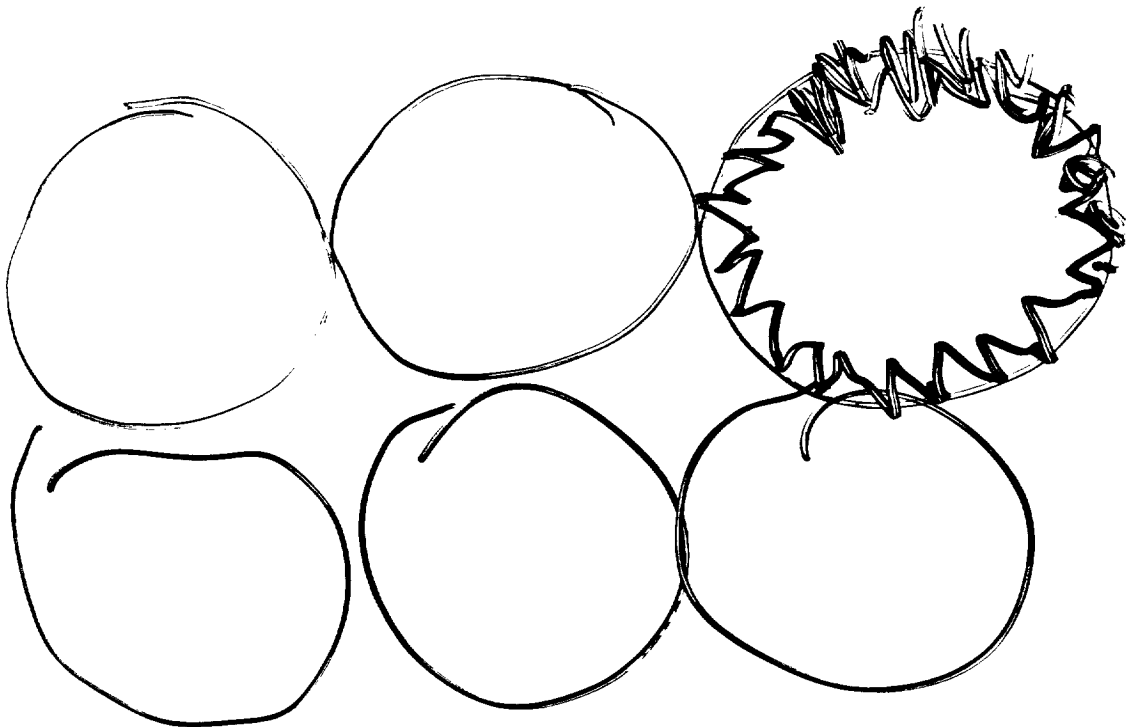
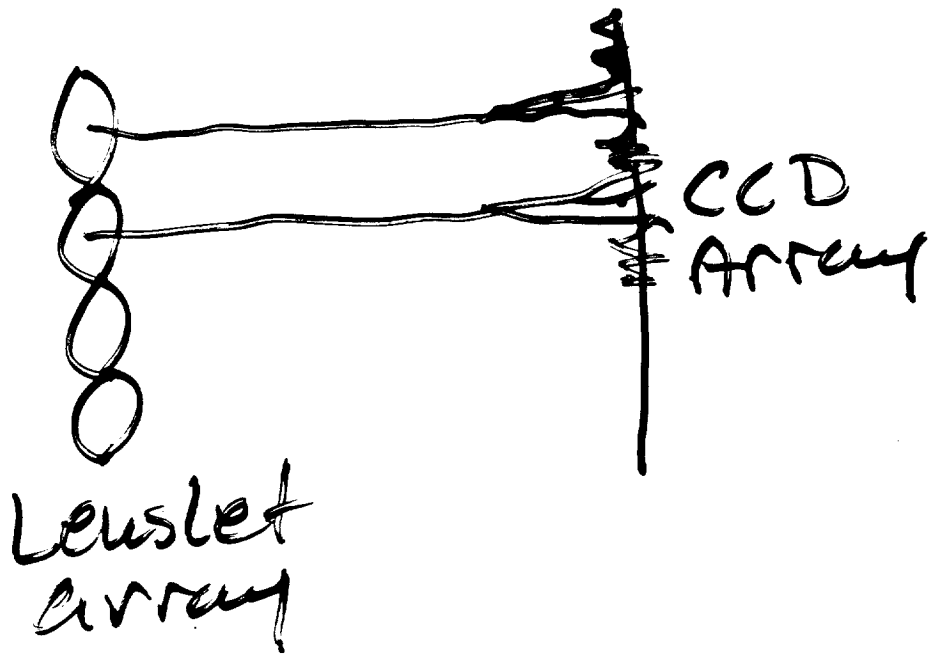
LIGO I^(*) - Todd Rutherford

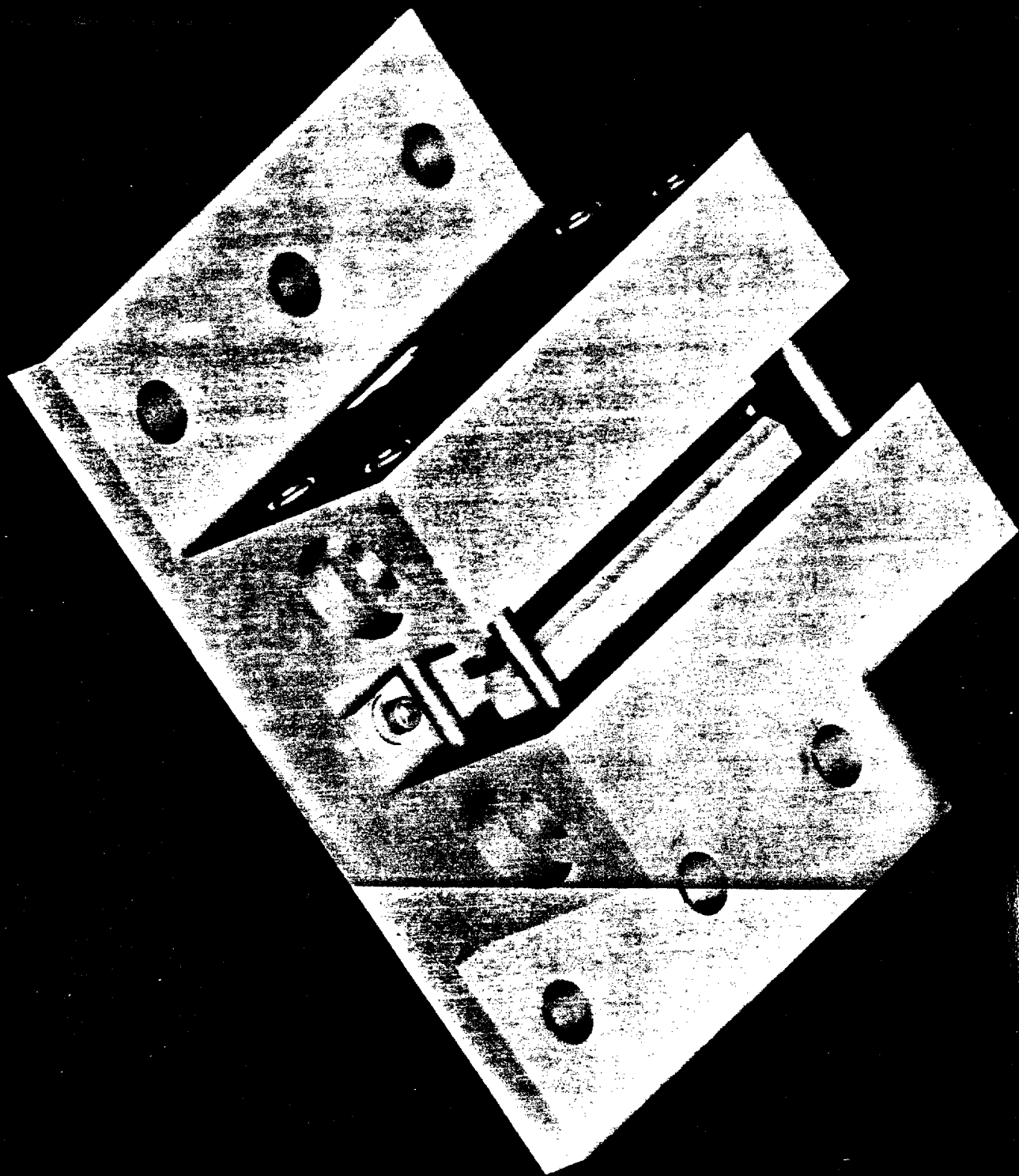
Signal Recycling - Guido Müller

RSE - Jim Mason

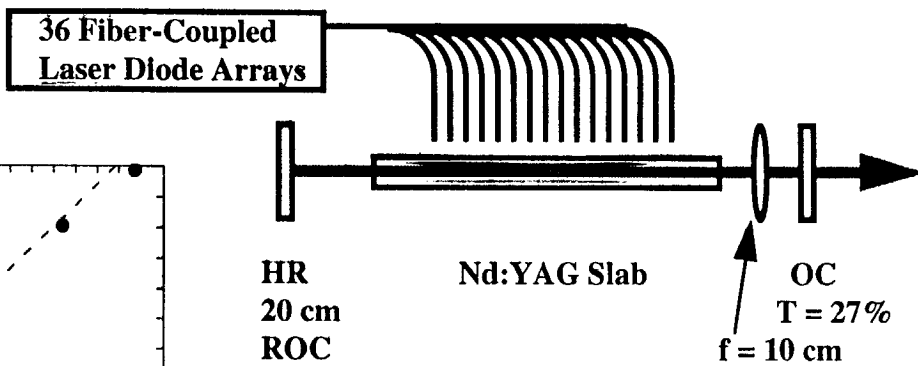
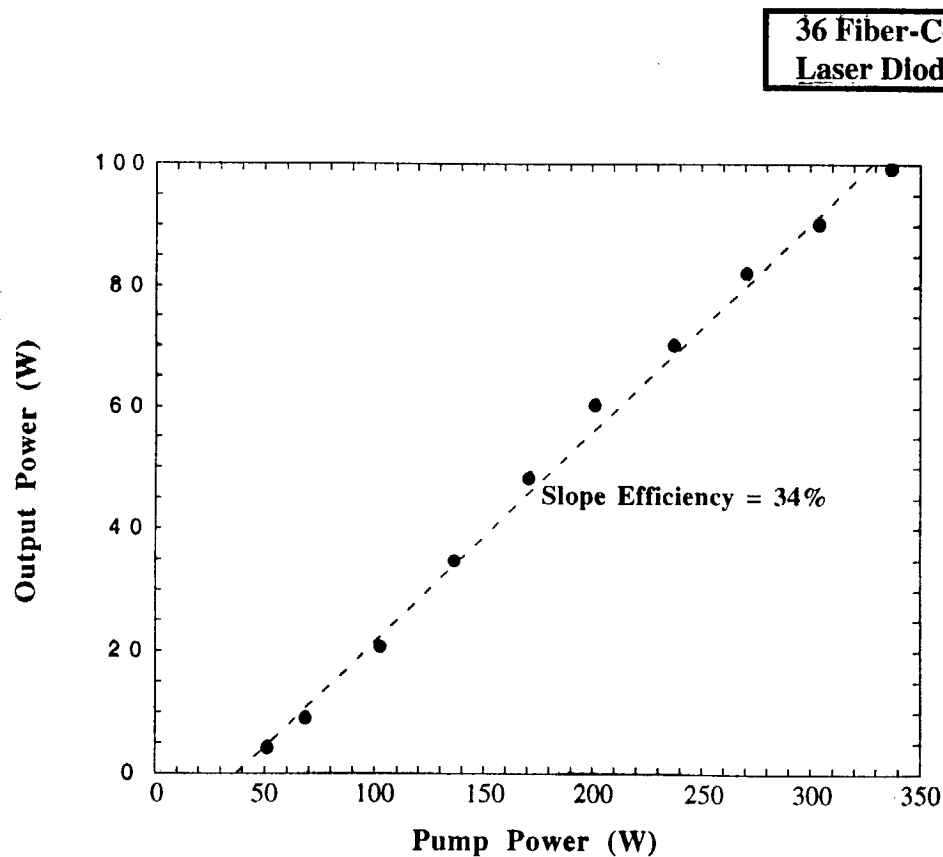
GES - Ken Strain

Shank-Hartmann Wave Front Sensor





Transverse-Pumped Conduction-Cooled Multi-Mode Slab Laser



- 1.0 % Nd concentration
- 1.7 x 1.8 x 58.9 mm slab
- 2.25 micron SiO₂ layer
- ~ 10% round trip loss

White Paper

1. $\frac{2}{3}$ - LIGO II $\frac{1}{3}$ - LIGO III

2. Specific Recommendations



3. OR - what needs to be learned

4. Report tomorrow on plans
for next 6 months & progress
on the white paper

Note 1, Linda Turner, 08/20/98 11:10:56 AM
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