

**SENSITIVITY IMPROVEMENT
AND
GRAVITATIONAL WAVE DETECTION**

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NSF Advanced LIGO Review

May 31, 2006

LIGO-G060333-00-M

Outline

- Evolution of the initial LIGO sensitivity
- Noise in the initial LIGO
- Program for improvements in sensitivity and duty cycle
- Enhanced initial LIGO
- Advanced LIGO
- Evolution of the capability for detection