

Proposal for Loyola University Participation in the LSC

Martin McHugh

LIGO-G010266-00-Z

14 August 2001

LSC meeting, LIGO Hanford
Observatory, Plenary Session

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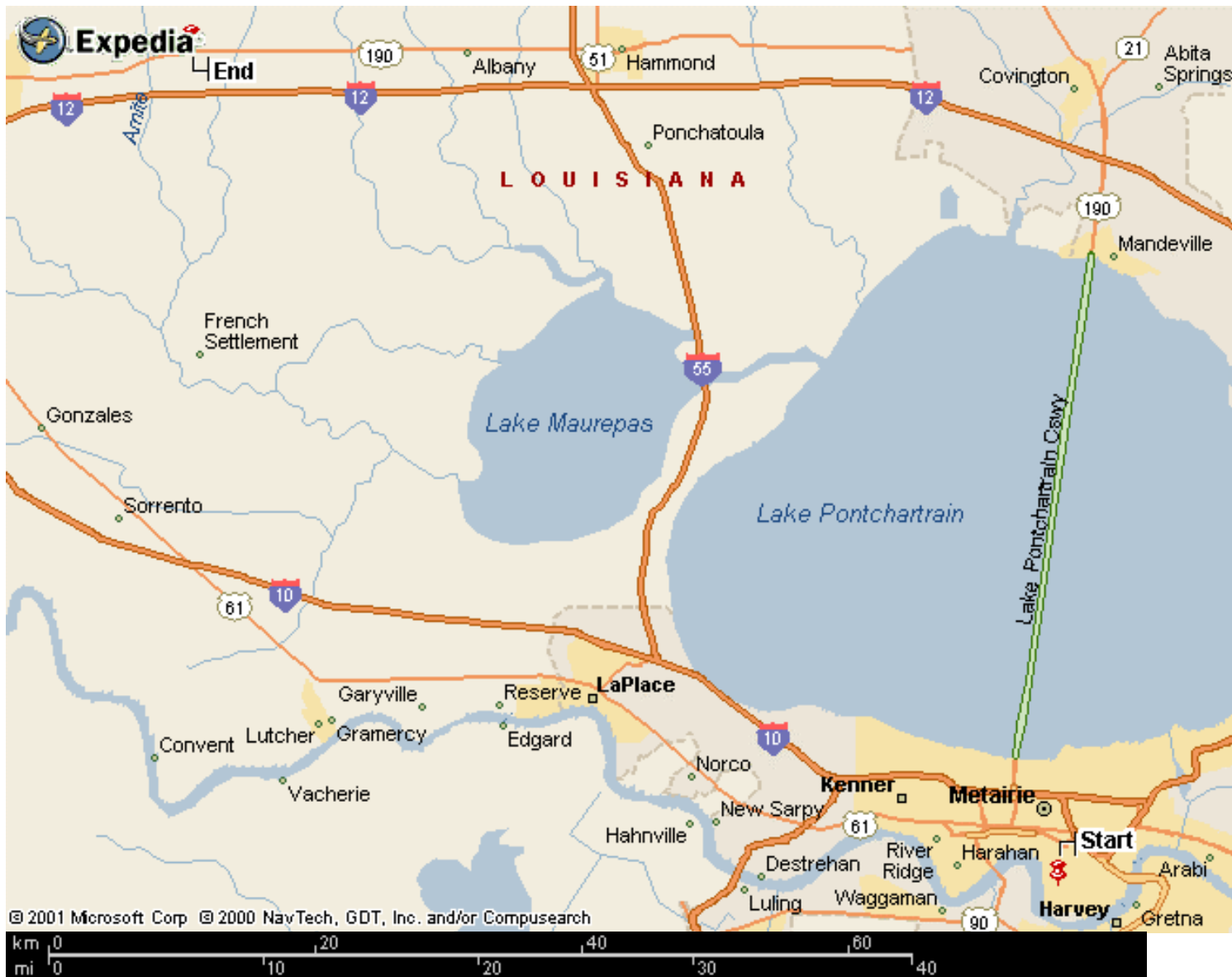
Loyola University New Orleans

- 5500 students -- primarily undergraduate

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Department of Physics

- Mickey King (chair)
- Carl Brans
- Martin McHugh* (postdoc at LSU)
- Charles Harb* (postdoc at Stanford)
- Daryl Steinhart

*proposed active LSC participant

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Department of Physics

- Enrollment of ~30 undergraduates in physics and pre-engineering
- Strong motivation for student involvement in research

Research activities

- Worked many years on ALLEGRO resonant detector
- Participation in stochastic sources upper limits group
- Collaboration with (mainly) UTB and LSU groups on LLO-ALLEGRO stochastic background experiment

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LLO - ALLEGRO correlation

- Good overlap (40 km separation) – different freq. than LLO-LHO
- Modulate the signal – rotate to align/misalign antenna patterns *
- Independent technology – less likely to have ‘built-in’ correlations

*A Technique for Modulating the Experimental Signature of a Cosmic Gravitational Wave Background, **Finn, L.S. and Lazzarini, A.** Accepted by Physical Review D
xxx.lanl.gov/abs/gr-qc/0104040

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Future Activities

- Include bar-ifo stochastic code in upcoming MDC
- Participate in E6 upper limits data run and subsequent analysis
- Part of LIGO I science run

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