

Abstract Submitted  
for the 4CF12 Meeting of  
The American Physical Society

**Wavelength-Shifting Light Collector Plates** WILLIAM JOHNSTON,  
NORM BUCHANAN, Colorado State University — The Long-Baseline Neutrino Experiment is a neutrino oscillation experiment designed to look for  $CP$ -violation in the neutrino sector. As part of the R&D effort for a proposed 200 kton water Cerenkov far detector three light collector designs were investigated that would guide extra photons to photomultiplier tubes and ultimately decrease the number of photomultiplier tubes needed. One light collector design uses flat plates of fluorescent plastic that guide photons to a photomultiplier tube through total internal reflection. Several experimental prototypes have been fabricated and tested for their light collection and timing characteristics. The results of this testing as well as simulations of the plates will be presented.

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Date submitted: 21 Sep 2012

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