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# NuLat: A Novel Design for a Reactor Anti-Neutrino Detector

## Authorship annotation

for the NuLat Collaboration

## Session and Location

Monday Session, Poster Wall #208 (Ballroom)

## Abstract content

NuLat is a new detector designed to study reactor anti-neutrinos at short baselines. NuLat is based on the Raghavan Optical Lattice (ROL), which uses segmented 6Li doped plastic cubical cells, separated by air gaps to take advantage of total internal reflection. The first phase of NuLat contains 125 cubes (5x5x5), each 6.3 cm (2.5") on a side, while the full detector will contain 3375, for a 15x15x15 array. NuLat features excellent spatial and energy resolution, good background rejection, and sensitivity to inverse beta decays and oscillation patterns.

## Poster included in proceedings:

yes

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**Session Classification :**   Poster Session Monday

**Track Classification :**   Poster (participating in poster prize competition)