

Abstract Submitted  
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**Geometry Optimization in NOvA with Geant4**<sup>1</sup> VIVAN NGUYEN,  
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RATION — NOvA is a neutrino beam experiment, designed to detect neutrino  
oscillations. There are two detectors, placed at distances of 1km and 810 km from  
the proton target. The detectors are made of PVC filled with liquid scintillator. In  
simulating the experiment, an important aspect is the detector geometry, which is  
input to Geant4 using the GDML markup language. I will present studies in which  
the geometry description was systematically varied to find a configuration which  
preserved the modeling accuracy required by the experiment while minimizing the  
CPU time required for the simulation.

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