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Thermal Modeling of Auger Surface Detectors YEVGENIY PETROV, PATRICK BURNS, Colorado State University, PIERRE AUGER COL-LABORATION — The Southern Site of Pierre Auger Cosmic Ray Observatory started collecting data in 2004. The data sample collected by now is already several times bigger that data collected by each of preceding experiments in the field allowing for new significant results regarding cosmic ray energy spectrum and arrival directions. Meanwhile, progress is being made towards the Northern Site construction in South East Colorado. While appreciating fundamental theoretical physics, development of which is the ultimate goal of such projects, it is also necessary to say that it is smaller scale tasks within a project that allow for this progress to happen. One such task in Auger North is thermal modeling of surface detectors (tanks filled with purified water). The goal is to be able to predict amount of insulation needed to prevent water inside from freezing and damaging the detector under bad weather conditions that often happen in Colorado during the winter. The models used and preliminary results will be described.

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