"Design of the MooSci Lunar Scintillometer"

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To develop next generation telescopes and adaptive optics (AO) systems, it is crucial to understand the characteristics of an astronomical site. Lunar scintillometers are an important tool to aid in this understanding. These instruments are able to measure atmospheric turbulence and its effect on astronomical seeing at the ground layer where telescope and observatory design play a role. Here we describe a new lunar scintillometer, MooSci, to aid in the site characterization campaign for the Giant Magellan Telescope (GMT). MooSci has been tested and confirmed to provide reliable data for the reconstruction of turbulence profiles.