

45th IAA SYMPOSIUM ON THE SEARCH FOR EXTRATERRESTRIAL INTELLIGENCE (SETI) –
The Next Steps (A4)
SETI 1: SETI Science and Technology (1)

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ADVANCING SETI SEARCH METHODS AT NEAR-INFRARED AND OPTICAL WAVELENGTHS

Abstract

We have designed and commissioned the first SETI (Search for Extraterrestrial Intelligence) instrument to search for pulsed laser signals at near-infrared (900 - 1700 nm) wavelengths. The new instrument design builds upon our past optical SETI work, and is the first step toward a more versatile and sophisticated generation of very fast optical and near-infrared pulse search devices ($> 1\text{GHz}$). The near-infrared and optical SETI (NIROSETI) instrument was commissioned at Lick Observatory in 2015 and is now in a campaign survey mode. We will present the advantages of conducting SETI searches at near-infrared wavelengths, and will show the overall instrument concept design and target selection. We will also present our new algorithms for searching for pulsed laser signals and summarize our next steps in future near-infrared and optical SETI searches.