

**GROUND-BASED CORONAL PHYSICS IN THE NEXT DECADE: THE DKIST VIEW.** T. A. Schad<sup>1\*\*</sup>, A. Fehlmann<sup>1</sup>, S. Jaeggli<sup>1</sup>, J.R. Kuhn<sup>2</sup>, H. Lin<sup>2</sup>, and L.A. Tarr<sup>1</sup>, <sup>1</sup>National Solar Observatory, 22 Ohia Ku St, Pukalani, HI 96768, <sup>2</sup>Institute for Astronomy, University of Hawaii, 34 Ohia Ku St., Pukalani, HI 96768, HI, \*\* email: tschad@nso.edu

**Abstract:** Collaborative multi-instrument and multi-model efforts are the cornerstones by which we progress towards a more comprehensive view of the magnetized solar corona and its influence on inner heliosphere. The recent commissioning of the Daniel K Inouye Solar Telescope[1] brings forth revolutionary capabilities as well as unclaimed potential for the measurement of coronal magnetic fields via polarized emission lines that are a critical component in any broader system model. First light instrumentation, including the Cryo-NIRSP[2] and DL-NIRSP[3] instruments, is already well-positioned to make significant progress, but in the next decade, these advances will require further investment and development to ensure efficient, multiplexed observations at the cadences and resolutions required to study solar energetic events. In this contribution, we discuss planned upgrades, synergies, and future concepts for coronal science using the 4 meter DKIST coronagraph.

**References:**

[1] Rimmele, T.R. et al. (2020) *Solar Physics*, 295, 172, <https://doi.org/10.1007/s11207-020-01736-7> [2] A. Fehlmann et al. (2021) *Solar Physics*, in prep. [3] S. Jaeggli et al. (2021) *Solar Physics*, in prep.