

P07a **Subaru Strategic Exploration of Exoplanets and Disks with HiCIAO/AO188 (SEEDS): Proposal**

田村元秀、臼田知史、高見英樹 (国立天文台)、山田亨 (東北大学)、高見道弘 (ASIAA)、神鳥亮 (国立天文台)、松尾太郎 (名大)、鈴木竜二、森野潤一、石井未来 (国立天文台)、工藤智幸、橋本淳 (総研大)、岡本美子 (茨城大)、佐藤文衛 (東工大)、片坐宏一 (JAXA)、大橋永芳 (ASIAA)、E. Turner、A. Moro-Martin (プリンストン大)、SEEDS team

Since the first detection of exoplanets orbiting normal stars in 1995, many exciting discoveries have been made, but our understanding of planetary systems and their formation is far from complete. Armed with a much better performance than that of the CIAO-AO36 combination, we propose to conduct a Subaru-HiCIAO-AO188 imaging survey as a Subaru Strategic Observation, searching for giant planets ($1 M_J < \text{mass} < 13 M_J$) and protoplanetary/debris disks mainly around 500 nearby solar-type or more massive young stars. The ages of our exoplanet target stars span $\sim 1\text{-}10$ Myr for YSOs in nearest star forming regions, through $\sim 100\text{-}500$ Myr old stars in nearby open clusters, to ~ 1 Gyr old nearby stars. Direct imaging is indispensable for the detection of such “young” planets, especially planets in outer circumstellar regions (a few AU - 100 AU), complementary to radial velocity searches. The protoplanetary disk targets are the YSOs in nearby star forming regions. The completeness and uniformity of this systematic survey will provide important statistical, or even useful null, results to be obtained as well as enabling the study of individual objects of particular interest. In this talk, we will outline the proposal, emphasizing our target selection strategy and expected results. A full list of the proposers can be found on our web site.