

Development of optical diffusers and the on-sky examination

*西海 拓^{1,2}、成田 憲保^{3,2,7,8}、福井 暁彦³、渡辺 紀治³、川内 紀代恵³、泉浦 秀行⁴、前原 裕之⁴、日下部 展彦^{2,4}、磯貝 桂介⁵、寺田 由佳^{6,9}、John Livingston³、森 万由子³

*Taku Nishiumi^{1,2}, Norio Narita^{3,2,7,8}, Akihiko Fukui³, Noriharu Watanabe³, Kiyoe Kawauchi³, Hideyuki Izumiura⁴, Hiroyuki Maehara⁴, Nobuhiko Kusakabe^{2,4}, Keisuke Isogai⁵, Yuka Terada^{6,9}, John H Livingston³, Mayuko Mori³

1. 総合研究大学院大学、2. アストロバイオロジーセンター、3. 東京大学、4. 国立天文台、5. 京都大学、6. Academia Sinica、7. Instituto de Astrofísica de Canarias (IAC)、8. Japan Science and Technology Agency、9. National Taiwan University

1. SOUKENDAI, 2. Astrobiology Center, 3. The University of Tokyo, 4. National Astronomical Observatory of Japan, 5. Kyoto University, 6. Academia Sinica, 7. Instituto de Astrofísica de Canarias (IAC), 8. Japan Science and Technology Agency, 9. National Taiwan University

Over four thousands of exoplanets have been found to date. It is important to reveal the detailed physical properties of these exoplanets by various methods, including high-precision transit photometry from the ground. Some groups adopted diffusers and succeeded to observe transiting exoplanets for high-precise observation from the ground. Diffusers can enlarge light from stars and keep the shape of stars. We developed optical diffusers to observe transiting exoplanets for high precise photometry and equipped them to MuSCAT.

We examined the diffusers' capability compared with defocus and in-focus observing methods in the on-sky examination. We confirmed that the stability of diffusers are more stable than other observing methods.

We will report the details in this poster.

キーワード：系外惑星、測光、ディフューザー、観測

Keywords: exoplanets, photometry, diffuser, observation