

Development of Exoplanet Observation System using ExoKyoto

Yosuke Yamashiki¹, Takao Doi³, *Takanori Sasaki², Akihiro Yamanaka⁵, Yuuki Saito⁵, Shigeru Namiki⁵, Keiya Murashima⁵, Natsuki Hosono¹, Shota Notsu², Yuta Notsu², Kuroki Ryusuke¹, Hiroaki Sato⁴, Fuuka Takagi⁶

1. Global Water Resources Assessment Laboratory - Yamashiki Laboratory Graduate School of Advanced Integrated Studies in Human Survivability Kyoto University, 2. Graduate School of Science, Kyoto University, 3. KYOTO UNIVERSITY UNIT OF SYNERGETIC STUDIES FOR SPACE, 4. Faculty of Engineering, Kyoto University, 5. Faculty of Science, Kyoto University, 6. Faculty of Agriculture, Kyoto University

An integrated database of confirmed exoplanets has been developed and launched as “ExoKyoto,” for the purpose of better comprehension of exoplanetary systems in different star systems. The HOSTSTAR module of the database includes not only host stars for confirmed exoplanets, but also over hundred thousands of stars existing in the star database listed in (HYG database). Each hoststar can be referred to in the catalogue with its habitable zone calculated, based on the observed/estimated star parameters. For outreach and observation support purpose, ExoKyoto possesses Stellar Windows, developed by the Xlib & Ggd module, and interfaces with GoogleSky for easy comprehension of those celestial bodies on a stellar map. Target stars can be identified and listed by using this database, based on the target magnitude, transit frequency, and photon decrease ratio by its transit. Using the developed exoplanet observation system on ExoKyoto, we performed some test observations at Kwasan Observatories, Kyoto University. We will show some preliminary results of the observations and introduce how to use the exoplanet observation system using ExoKyoto.

Extrasolar Planet's Catalogue (ExoKyoto)

<http://www.exoplanetkyoto.org>

Keywords: Extrasolar Planets, Exoplanetkyoto, habitable zone