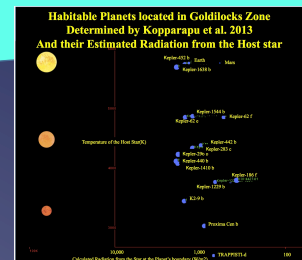
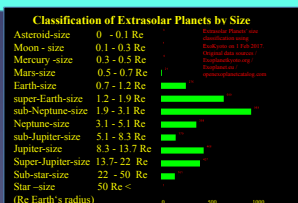
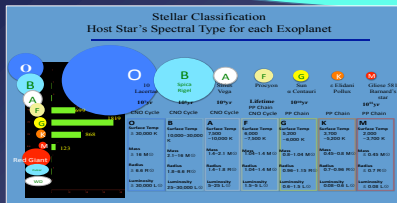


DEVELOPMENT OF EXOPLANET DATABASE "EXOKYOTO" AIMING FOR INTER-COMPARISON WITH DIFFERENT CRITERIA OF HABITABLE ZONES



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 hundreds of 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. If we interpolate deficient data using assumed functions about the exoplanets that were discovered until now, Sub-Neptune size (1.9-3.1 R_{Earth}) are the most common (971); then Super Earth size (1.2-1.9 R_{Earth}) have been allocated (681). Using the Solar Equivalent Astronomical Unit (SEAU), most of the exoplanets discovered are within a Venus equivalent orbit (320), and 197 are located within the habitable zone (Venus to Mars equivalent orbit). If we classify them using Kopparapu et al.(2013), within Recent Venus equivalent orbit (3048), there are 130 located in the habitable zone (runaway greenhouse-maximum greenhouse). For example, Kepler-560b is defined as in the habitable zone by its SEAU, but not by Kopparapu et al. (2013). Furthermore, based on an exoplanet's solar revolution, radius, assumed mass (Larsen & Geoffrey, 2014), transit parameters, and main star information (location, class, spectral class, etc.); observation target selection is practical and possible. In addition to the previous habitable zone based on the normal radiation flux from the host star, we'll discuss stellar flare activities which may disturb planets located in the habitable zone through high energetic particles.

