

The targets of EChO: availability and characterization of the host stars

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EChO will observe a large sample of transiting exoplanets spanning a wide range of exoplanet/host star combinations. More than 100 planets are already known that could be observed today by EChO and deliver high-quality data. It is also expected that the numerous ongoing and future transit search experiments will go on discovering new targets of EChO interest, improving on those presently available. A statistical analysis of the occurrence of transiting planets has been carried out to predict the future "maximal" sample of exoplanets that pose the best observing circumstances for EChO. The main objective of this activity is to obtain estimates of the potential range of stellar and planet parameters and to quantify the bright-end population of transiting objects. In the talk we will present the so-called Mission Reference Sample and discuss its statistical properties. In addition, we will briefly present some modeling efforts on the magnetic activity properties of the stellar hosts, since such photometric variations pose a challenge to detecting the planet atmosphere signals.