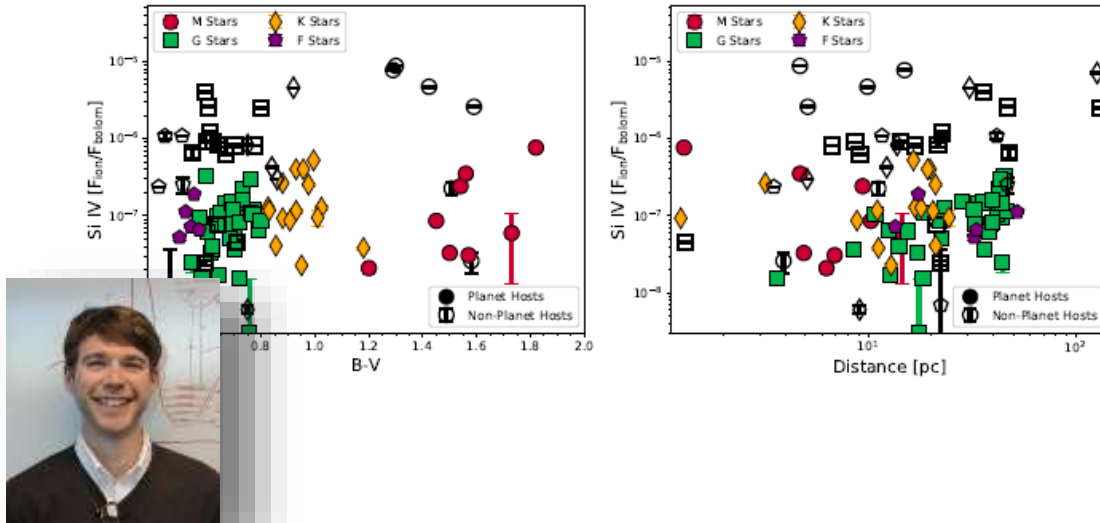


10. OKTOBER 2019

15.30 UHR

 VICTOR FRANZ HESS-FORSCHUNGSZENTRUM
 VORTRAGSSAAL U.A.4 (UNTERGESCHOSS)
 SCHMIEDLSTRASSE 6, 8042 GRAZ


EINLADUNG ZUM VORTRAG

POTENTIAL HABITABILITY OF ROCKY PLANETS AROUND RED DWARFS

STELLAR DRIVERS FOR ATMOSPHERIC CHEMISTRY AND STABILITY

KEVIN FRANCE
University of Colorado

High-energy photons and particles from stars regulate the atmospheric temperature structure and photochemistry on orbiting planets, influencing the long-term stability of planetary atmospheres and the production of potential “biomarker” gases. Rocky planets orbiting low-mass stars (M dwarfs) will likely be the first exoplanets directly probed for signs of life, however, relatively few observational and theoretical constraints exist on the high-energy irradiance from typical (i.e., weakly active) M dwarf exoplanet host stars. In this talk, I will describe results from an ongoing panchromatic survey (Chandra/XMM/Hubble/ground) of M and K dwarf exoplanet hosts. The MUSCLES Treasury Survey combines UV, X-ray, and optical observations, reconstructed Lyman-alpha and EUV (10-90 nm) radiation, and next-generation stellar atmosphere models to provide realistic inputs for modeling the stability and climate on potentially habitable planets around red dwarfs.

KONTAKT
MARTIN VOLWERK
 T +43 316 4120-575
 MARTIN.VOLWERK@OEAW.AC.AT

IWF
 INSTITUT FÜR
 WELTRAUMFORSCHUNG