

CONTROL ID: 2257050

TITLE: VVV Survey Search for Habitable Planets around M Dwarfs

ABSTRACT BODY:

Abstract Body: VISTA Variables in the Vía Láctea (VVV) is a public ESO near- infrared (near-IR) variability survey aimed at scanning the Milky Way Bulge and an adjacent section of the mid-plane. The survey covers an area of 562 sqdeg in the Galactic bulge and the southern disk, containing a billion point sources. In this work we discuss the selection of nearby M-type dwarf stars using multicolor cuts. The ZYJHKs photometry allows an accurate estimation of the spectral types of the M-dwarf candidates. Our procedure is applied for fields located far from the Galactic center where the photometric quality is best. The results of this search covering 15 sqdeg allow us to estimate the total number of M-dwarfs that can be photometrically monitored in the VVV database. In addition, we analyze the light curves of the ~10000 best candidate M-dwarf stars searching for extrasolar planetary transits. In this poster we present the light curves of a hundred good transit candidates, and select those that lie in the HZ around their parent stars.

CONTACT (NAME ONLY): Dante Minniti

CONTACT (E-MAIL ONLY): dante@astrofisica.cl

AUTHORS/INSTITUTIONS: D. Minniti, Ciencias Físicas, Universidad Andrés Bello, Santiago, RM, CHILE|D. Minniti, CATA, MAS, Santiago, CHILE|

PRESENTATION TYPE: Oral