

## ORAL CONTRIBUTION

### THE GIGA-CMD OF THE VVV SURVEY

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The Vista Variables in the Vía Láctea (VVV) survey has changed our picture of the inner Galaxy in the last years. The inner regions of our Galaxy are hidden behind a curtain of gas and dust, and their observations at visible wavelengths are severely hampered by this fact. Observations in the near-infrared are better suited due to the diminished effect of extinction at these wavelengths. VVV, one of the six ESO public surveys conducted with the 4m VISTA telescope in Paranal, has observed 562 square degrees of the Galactic bulge and an adjacent region of the southern disk in the Z, Y, J, H, and Ks near-infrared filters during the last 6 years.

Using PSF photometry on the VVV images, we have produced a deep and highly complete color-magnitude diagram (CMD) with nearly one billion sources that gives us an unprecedented view of the Galactic bulge and inner disc. In our contribution I will present this CMD and the first results of its analysis. I will talk especially about its implications in terms of structure of the inner Galaxy, the stellar populations residing in it, and the information that can be extracted to determine such fundamental quantities as the weight of the Galactic bulge. I will also mention the possibilities it provides to better understand the reddening law towards the inner Galaxy and to provide high-definition extinction maps.

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