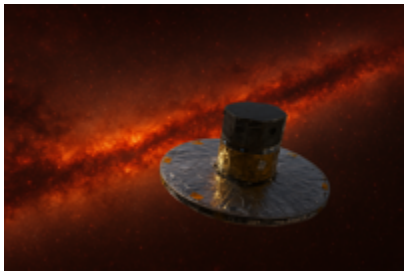

Contribution ID: **76** Type: **not specified**

A Massive Star Census of the Magellanic Cloud

Wednesday 28 January 2026 12:07 (7 minutes)

The fourth phase of the Alma Luminous Star (ALS) catalogue aims to create the most comprehensive and complete sample of massive stars in the Magellanic Clouds (MCs). By combining Gaia DR3, which provides high-precision photometric and astrometric data, with SIMBAD, which compiles complementary information from the literature, such as spectroscopy classification, we can identify likely massive stars based on photometry cuts
and star identifiers. Incorporating additional datasets, including UBV photometry from Zaritsky et al. (2002, 2004) and JKs photometry from VISTA and 2MASS, allows us to filter out the remaining intermediate-mass stars effectively. Consequently, our sample encompasses not only the clearly massive stars above the 8 solar masses isochrone in the Color-Magnitude Diagram (CMD), but also reddened massive stars below it that are often overlooked in previous catalogues. The final catalogue will cover both the Large and Small Magellanic Clouds (LMC and SMC) as well as the Magellanic Bridge (MB), providing a valuable resource for studies of the MCs'structure, peculiar stellar populations, refinement of the Initial Mass Function (IMF), and investigations into extragalactic black holes and gravitational waves, among other applications.

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