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A highly ionized stellar bow shock in the Small Magellanic Cloud

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Abstract

We report the discovery of a parsec-scale stellar bow shock associated with the O2 III(f) star Walborn 3 in the cluster NGC 346 of the Small Magellanic Cloud. Emission line images of He II and [Ar IV], etc.

Keywords: Atomic physics; Radiative transfer; Photodissociation regions

[1] Thank you.

Facilities: VLT:Yepun (MUSE)

REFERENCES

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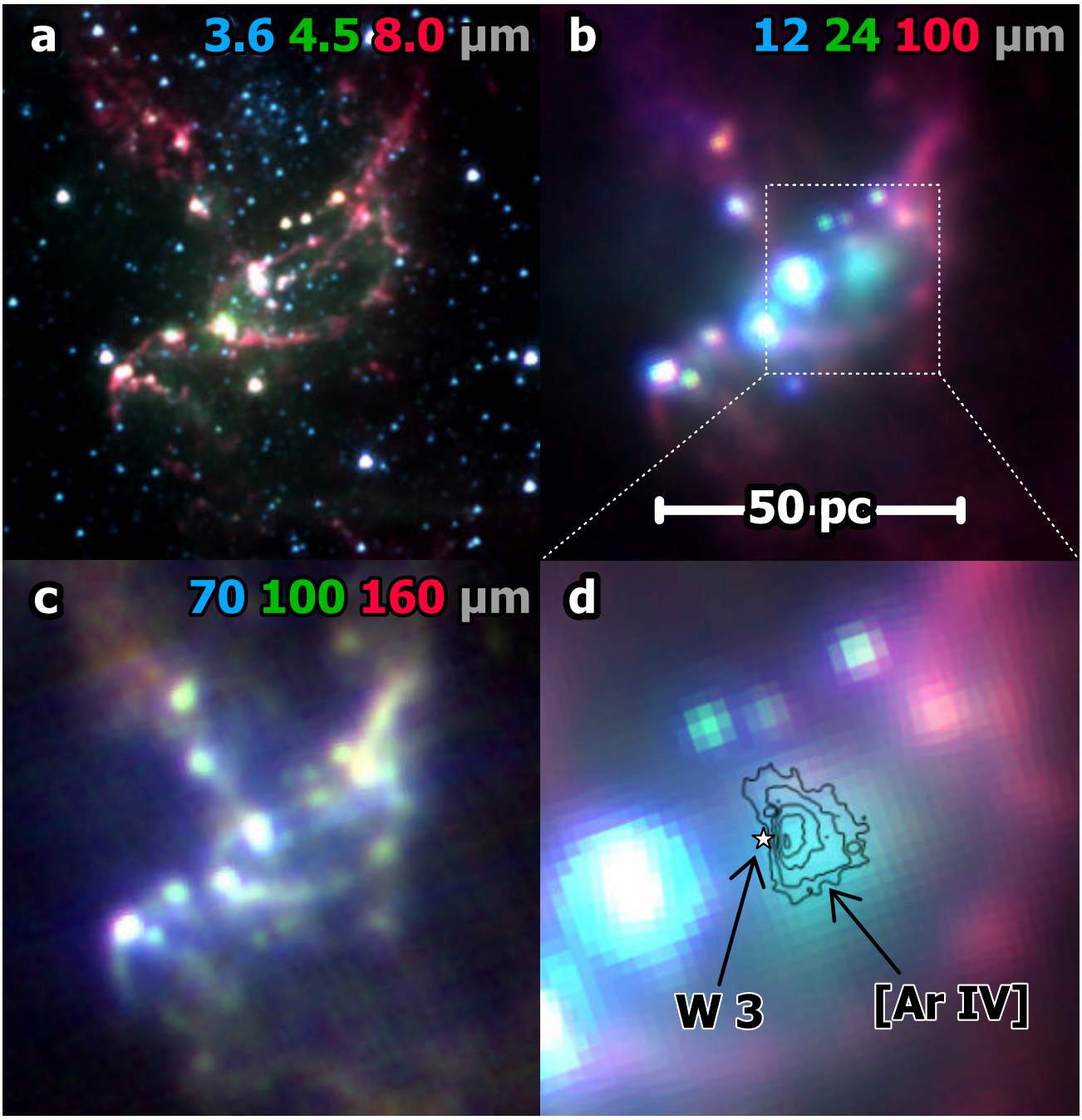

Figure 1. Panoramic view of the NGC 346/N66 region at infrared wavelengths: (a) Short wavelength mid-infrared (3.6 to 8 μm); (b) Longer wavelength mid-infrared (12 to 100 μm); (c) Far-infrared (70 to 150 μm); (d) Zoomed view of panel c. Images are from satellite observatories as follows: *Spitzer* IRAC 3.6, 4.5, 8 μm); *WISE* 12 μm; *Spitzer* MIPS 24, 70 μm; *Herschel* PACS 100, 150 μm.

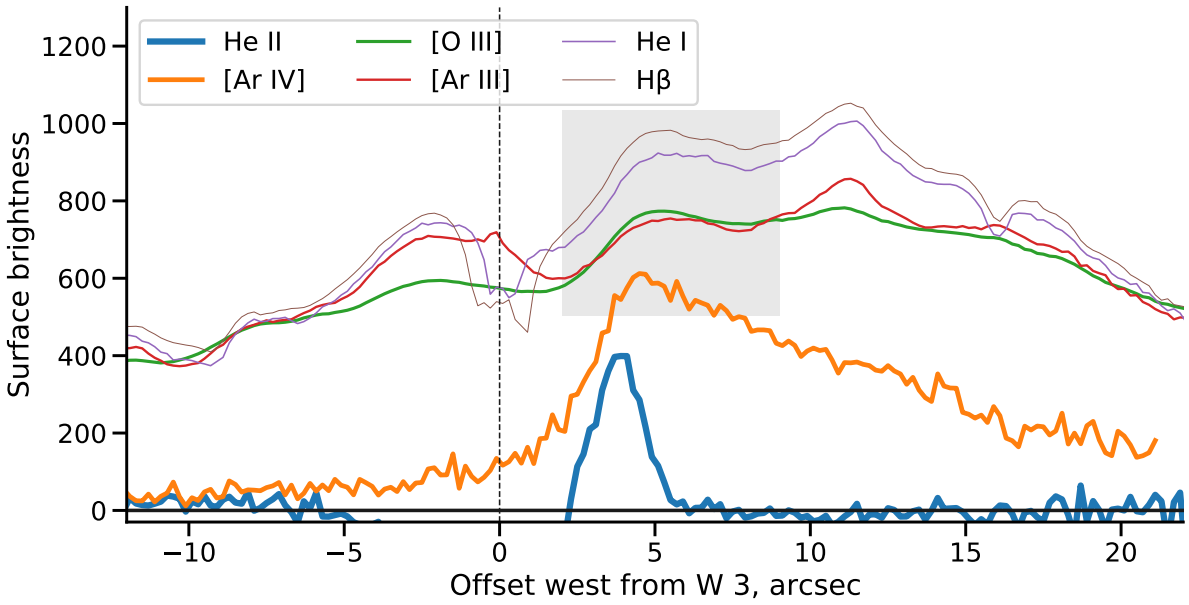

Figure 2. Emission line surface brightness profiles along an East–West cut across the bow shock.

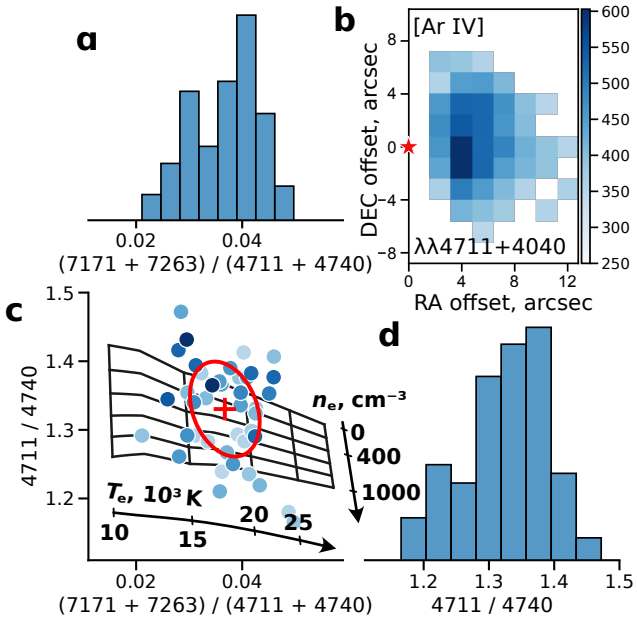

Figure 3. Temperature and density diagnostics of the bow shock from [Ar IV] line ratios.