

Spectroscopy and photometry of MWC 137

F. Alimardanova^{1*}, A. Miroschnichenko^{2,3}, S. Zharikov⁴, R.J. Rudy⁵, N. Manset⁶,
A.V. Kusakin^{3,7}, K.S. Kuratov^{3,7,8}, S.A. Khokhlov⁸

¹N. Tusi Shamakha Astrophysical Observatory of the National Academy of Sciences of Azerbaijan, Yu. Mamedaliev Settlement, Azerbaijan

²Department of Physics and Astronomy, University of North Carolina at Greensboro, Greensboro, NC 27402–6170, USA

³National center of space exploration and technologies, Almaty, Kazakhstan

⁴Instituto de Astronomía, Universidad Nacional Autónoma de México, Ensenada, Baja California, 22800, Mexico

⁵Aerospace Corporation, Los Angeles, CA, USA

⁶CFHT Corporation, 65–1238 Mamalahoa Hwy, Kamuela, HI 96743, USA

⁷Fesenkov Astrophysical Institute, Observatory 23, Almaty, 050020, Kazakhstan

⁸Al-Farabi Kazakh National University, Al-Farabi Av., 71, Almaty 050038, Kazakhstan

MWC 137 is an object with a strong emission-line spectrum associated with an 1 arcminute size H II region Sharpless 266. It was included in a catalog of planetary nebulae in 1967, in the first list of objects with the B [e] phenomenon in 1976, and in a list of Herbig Ae/Be stars in 1984. All these classifications imply very different evolutionary state. A close analysis of the stellar and nebular spectra of MWC 137 by several authors suggested that it is most likely a B[e] supergiant located at a distance 4–6 kpc away from the Sun. No high-resolution spectra of the object have been published so far. We present the results of our analysis of high-resolution optical spectra of MWC 137 obtained in 2004–2015 at different observatories and a high-accuracy *UBVRI* photometry obtained at the Tien-Shan Astronomical Observatory (near Almaty, Kazakhstan) that is intended to solve the problem of its nature and evolutionary state.

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*E-mail: fakhranda.lh@gmail.com