Context. Massive-binary evolution models predict that some systems will go through an evolutionary phase where the original primary has become a supernova and left a compact object behind that then orbits a Wolf-Rayet (hereafter, WR) star. WR 138 is an X-ray bright WR star that has been described as a triple system, including a compact companion in a short-period orbit.

Aims. Our goal is to search for spectroscopic evidence of a compact companion around WR 138.

Methods. We used optical and X-ray spectra to search for signatures of a compact companion, which can be revealed by systematic variations in WR optical spectral lines induced by orbital motion of the compact companion or by hard, luminous X-rays from accretion onto this companion.

Results. The optical spectra display emission-line profile variations that are most probably caused by clumps inside the stellar winds. The radial velocities do not vary on a short time-scale compatible with the suggested orbital period of a putative compact companion. The X-ray spectra are found to be normal for a WN5-6+OB system with no indication of accretion by a compact companion.

Conclusions. There is no evidence for the presence of a compact companion, and we therefore conclude that WR 138 is a normal long-period (P~1521 d) eccentric WR+OB system.

Reference: Astronomy & Astrophysic
Status: Manuscript has been accepted

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