OPTICAL STUDY OF THE FIELD OF THE COMPACT CENTRAL OBJECT IN SNR G266.1-1.2 ("VELA JUNIOR")

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The shell-like SNR G266.1-1.2 appears projected against the much more extended Vela remnant. The inferred hydrogen column density suggests a location farther than the latter (1-2 kpc) although the possible detection of the short-lifetime 44Ti gamma-ray line at 1.156 MeV might imply a very young age and a distance of only 200 pc. The quest for the compact remnant associated to G266.1-1.0 started with the detection of possible X-ray candidates by ROSAT, ASCA and BeppoSAX. This was recently identified with a soft X-ray source localized with an accuracy of 2” with Chandra. The spectrum and luminosity of this source are difficult to explain with a very young and nearby neutron star as suggested by gamma-ray line observations of the associated SNR. We will report our results on the possible optical counterparts of this interesting X-ray source belonging to the emerging class of radio/gamma-quiet neutron stars.