X-ray observations of HESS J1303-631

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HESS J1303-631 has been serendipituously detected by H.E.S.S. during the 2004 observation of the binary pulsar PSR B1259-63. It is extended with a full width of about 0.3°, its flux above 380 GeV is constant and of the order of 17% of the Crab flux. It is very similar to other extended sources detected during the H.E.S.S. Galactic plane scan, some of which have been associated to supernova remnants and pulsar wind nebulae. No obvious counterpart at other wavelengths has been found. Observations of the region with XMM-Newton have been performed to look for X-ray extended emission and potential counterparts. Results are detailed here as well as new TeV data obtained in 2005 on the source. In the light of these results we discuss the plausible origin of the very high energy emission.