EUV spectrometric observation of isolated neutron star PSR B0656+14

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Three isolated neutron stars have been observed previously by the Extreme Ultraviolet Explorer (EUVE) satellite, namely, PSR B0656+14, Geminga, and RX J1856.5-3754. The pulsar PSR B0656+14 is one of the brightest X-ray emitting isolated neutron stars found in the survey of ultrasoft sources in Einstein Observatory database. We have observed the source using Extreme Ultraviolet Explorer (EUVE) and combined the data with archival ROSAT data. In the present study we present an extensive description of PSR B0656+14's thermal emission. These data are consistent with emission originating from a thermal stellar surface augmented by a hot, thermal "polar-cap" and an additional magnetospheric component.