

# Discovery of an X-ray nebula associated with the solitary millisecond pulsar PSR J2124–3358

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**ABSTRACT:** We report the discovery of an X-ray nebula associated with the nearby millisecond pulsar PSR J2124–3358. This is the first time that extended emission from a solitary millisecond pulsar is detected. The emission extends from the pulsar to the northwest by  $\sim 0.5$  arcmin. The spectrum of the nebular emission can be modeled with a powerlaw spectrum of photon index  $2.2 \pm 0.4$ . This is in line with the emission originating from accelerated particles in the post shock flow.