



Suzaku Discovery of Twin Thermal Plasma from the Tornado Nebula

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The Tornado nebula (G357.7-0.1) is a mysterious radio source with bright "head" and faint "tail" located in the direction of the Galactic center (GC) region. We here report the discovery of two diffuse X-ray sources at the head and tail of the Tornado with the Suzaku satellite. We found emission lines from highly ionized atoms in the two sources. The spectra are reproduced by an optically thin thermal plasma with a common temperature of 0.6-0.7 keV. The interstellar absorption (NH) of these sources are the same and are slightly larger than that of the GC distance. Since the estimated distance using the NH value is consistent with the radio observation of the Tornado, these X-ray sources are likely associated with the Tornado nebula. The twin-plasma morphology at the both ends of the Tornado suggests that the system is a bipolar/outflow source.

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