

A MASSIVE IRON METEORITE SHOWER OVER NORTHWEST OF CHINA.

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Armanty, weighed 28 ton, was found in 1898 in Xinjiang, China. It was classified as an IIIIE iron [1]. In 2004, an iron (Ulasitai) of 430 kg was discovered 130 km southeast to Armanty and was later found to be paired with each other [2]. More recently, two massive irons, weighed 5 and 18 ton respectively, were recovered in the vicinity of Armanty (Fig. 1).

The two new irons are mainly composed of kamacite, taenite, and plesite with minor troilite, cohenite, and daubreelite. The Widmanstätten pattern in the 5 and 18 ton irons has a kamacite bandwidth of 0.89 ± 0.41 and 0.79 ± 0.22 mm, respectively. Kamacite in the 5 ton iron contains 4.76–6.63 wt% (average of 6.11 ± 0.71 wt%) Ni and 0.69–1.02 wt% (average of 0.77 ± 0.09 wt%) Co. Kamacite in the 18 ton iron contains 4.97–6.95 wt% (average of 6.17 ± 0.55 wt%) Ni and 0.68–0.81 wt% (average of 0.74 ± 0.03 wt%) Co. INNA of a specimen from the 5 ton iron yields 5.21 mg/g Co, 97.4 mg/g Ni, 17.2 $\mu\text{g/g}$ Ga, 16.0 $\mu\text{g/g}$ As, 0.50 ng/g W, 0.24 $\mu\text{g/g}$ Ir, 0.24 $\mu\text{g/g}$ Pt, and 1.87 $\mu\text{g/g}$ Au. It is clear that the 5 ton iron is also paired with Armanty. And most likely, the 18 ton iron will have the same composition as Armanty and Ulasitai.

The recovery sites of the four irons form a well-defined strewn field with the direction of northwest to southeast (Fig. 1). It is expected that more massive irons could be found in the area.

References: [1] Malvin D. J. et al. 1984. *Geochimica et Cosmochimica Acta* 48:785–804. [2] Xu L. et al. 2008. *Meteoritics & Planetary Science* 43:1263–1273.

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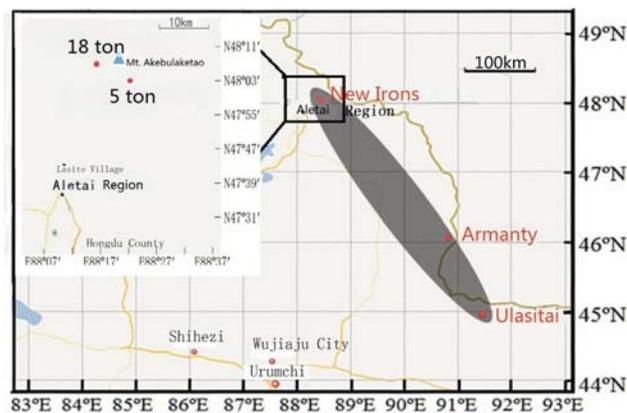


Fig. 1 The strewn field of Armanty