3,400-year-old tablets suggest King Tut's ancient dagger was not from Egypt

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A combined team of researchers from Japan and Egypt has found evidence that suggests a dagger found in King Tut's tomb had origins outside of Egypt. In their paper published in the journal *Meteoritics & Planetary Science*, the group describes their study of the dagger and also of the Amarna Letters tablets and what they learned by doing so.

When archaeologists opened King Tut's tomb in the early 1900s, they found among other things a dagger with an iron blade. The finding was interesting because the Iron Age had not yet started. Humans had not yet learned how to heat native iron to sufficient temperatures for smelting. Thus, it was assumed the dagger blade had been made by pounding metal from a meteorite found somewhere nearby. Humans were making many implements from iron from meteorites thousands of years before the

beginning of the Iron Age, thus the finding in Tut's tomb was not that unusual.

Over the years, the dagger has been studied by various researchers seeking to learn more about its origin. In 2016, a team of researchers confirmed the iron was from a meteorite and now in this new effort, the researchers have learned more about the kind of meteorite that had been used to make the blade. Their work involved firing non-destructive x-rays at the blade while using a microscope to get a closer look. In so doing, they found it was made of expected metals such as iron, manganese and nickel. It also had other material mixed in, such as sulfur zinc and chlorine. More interesting was the cross-stitch pattern they found on one part of the blade—it has been seen before in other natural objects and has been named the Widmanstätten pattern. This finding suggested the meteorite belonged to a group called octahedrites—the largest of the known iron meteorites. The same pattern has been seen in other artifacts, such as an ancient sword found in Japan.

Analysis of the blade composition could not reveal where the meteorite had landed, of course, but study of the Amarna Letters tablets provided some hints. The tablets were inscribed approximately 3,400 years ago—about a century before King Tut was interred. In looking at the transcription, the researchers noted a section where an iron dagger was mentioned. It was given to King Tut's grandfather by the King of Mitanni, suggesting the meteorite may have landed in what is now Syria.

More information: Takafumi Matsui et al, The manufacture and origin of the Tutankhamen meteoritic iron dagger, *Meteoritics & Planetary Science* (2022). DOI: 10.1111/maps.13787