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Studying the fossil meteorite Al Haggounia by X-ray Micro-CT

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Among the cutting-edge techniques that are being using in the meteoritics discipline to explore potential new properties, the micro-CT is useful in its potential of showing phase distribution in a 3D reconstruction and analyses of a small meteorite volume and in showing microstructures, crystal habits or grains, occurrences of vesicles or voids, melt veins and fractures. In this view, we studied a sample of Al Haggounia, a meteorite significantly porous with pore sizes from several cm to hundreds of microns. This meteorite after a complex history of classification results to be an EL-impact melt. The fragments show very different looking, from the point of view of microstructure of impact shock: melt veins, fractures and pores and, consequently, this meteorite is particularly suitable for investigations by micro-CT coupling with SEM-EDS analyses to fit the chemical data to the textural ones. All the data obtained help us in the genetic interpretation allowing to verify the hypothesis about the origin of this meteorite developed until now.