The research paper « Spectral Characterisation of hydrothermal alteration associated with sediment-hosted Cu-Ag mineralisation in the Central European Kupferschiefer » submitted by Gering and co-authors represents an interesting test of the contribution of hyperspectral imaging on drill cores for their mineralogical characterisation.

The test consists in the identification of the spatial distribution in the drill cores of spectral indices, whose interpretation is based on independent studies and calibrations.

Discrepancies (ex fig. 6b) with respect to interpretations proposed in the literature are attributed to possible effect of grain size, crystallinity and texture (ex near veins); however, the quite large discrepancy measured for dolomite, for instance, might arise from compositional differences with respect to the reference spectra and mixing between compositional poles occurring in the natural samples.

The authors compare hyperspectral imagery with micro X Ray fluorescence spectrometry to “validate” the alteration minerals. However, chemical mapping does not exactly correspond to a validation of mineral mapping as that would require comparison with independent techniques able to identify the same phases (for instance micro Raman mapping).

The study concludes that very fine grained and carbon-rich units are difficult to analyse and that peak overlap hinders the identification of some phases in some specific lithotypes (ex sulphates in qtz rich sandstones).

The potential shortcomings of the technique identified in this test are not summarized in the abstract and I suggest the authors add this important information in the summary.