
A quick look at the MAGIC database

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Résumé

In order to publish an article in most scientific journals, it is now often required that access be given to all paleomagnetic data, especially demagnetization data, rather than interpretations (FAIR principles). However, this requirement remains largely unfulfilled despite the existence of a dedicated database. Indeed, the MAGIC database (<https://www2.earthref.org/MagIC/about>) provides the possibility of a fairly comprehensive archive of the various data and interpretations obtained during most paleomagnetic studies. As of June 2023, about 250 of the more than 4400 contributions listed contain raw data. Most of the archived data correspond to studies published in the last ten years. MAGIC is based on a collection of open source Python programs for analyzing and uploading data but can be accessed without relying on the tools provided (Pmagpy). The complexity of the database archiving process is often cited as a reason for not publishing data. However, this complexity is partly the price to pay for the diverse information that can be stored. Despite the small number of contributions to the MAGIC website, we can already identify a number of problems, such as the failure of some users to follow basic rules such as sample orientation. There are also inconsistencies between the interpretations published in the articles and the actual data. Some data, such as low field susceptibility, which provides important information about magnetic carriers, is rarely archived. From my own experience with data archiving in MAGIC to reviewing a number of contributions, I will try to convince you of the usefulness of this archiving, which in my opinion should also be accompanied by a process of data evaluation. During an article evaluation process, reviewers should be able to evaluate the data, and the archiving condition should be automatic upon acceptance of the article, and not remain a promise of future publication by the authors. Such a measure would probably strengthen the MAGIC initiative that our American colleagues have been pursuing for almost 20 years. We should not forget that it is not the fanciful interpretations published in an article that are important, but the data.

Mots-Clés: Paleomagnetism, database, FAIR

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