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Towards data interchangeability in paleomagnetism

Christian Zeeden¹, Christian Laag^{1,2}, Pierre Camps³, Yohan Guyodo², Ulrich Hambach⁴, Janna Just⁵, Pontus Lurcock⁶, Christian Rolf¹, Sara Satolli^{7,8}, Stephanie Scheidt⁹, and Sebastien Wouters^{10,11}

¹LIAG, Leibniz Institute for Applied Geophysics, S5, Hannover, Germany (christian.zeeden@leibniz-liag.de)

²Palaeomagnetism Research Group, Institut de Physique du Globe de Paris, Paris, France

³Géosciences Montpellier, Université de Montpellier, Montpellier, France

⁴BayCEER & Chair of Geomorphology, University of Bayreuth, Bayreuth, Germany

⁵Fachbereich Geowissenschaften, Universität Bremen, Bremen, Germany

⁶Istituto Nazionale di Geofisica e Vulcanologia, Rome, Italy

⁷Dipartimento di Ingegneria e Geologia, Università "G. d'Annunzio" di Chieti-Pescara, Chieti, Italy

⁸CIMaN-ALP – Alpine Laboratory of Paleomagnetism, Peveragno, Italy

⁹Institut für Geologie und Mineralogie, University of Cologne, Cologne, Germany

¹⁰Sedimentary Petrology, Liege University, Liège, Belgium

¹¹O.D. Earth and History of Life, Royal Belgian Institute of Natural Sciences, Brussels, Belgium

Paleomagnetic data are used in different data formats, adapted to data output of a variety of devices and specific analysis software. This includes widely used openly available software, e.g. PMag.py/MagIC, AGICO/.jv6 & .ged, and PuffinPlot/.ppl. Besides these, individual software and data formats have been established by individual laboratories.

Here we compare different data formats, identify similarities and create a common and interchangeable data basis. We introduce the idea of a paleomagnetic object (pmob), a simple data table that can include any and all data that would be relevant to the user. We propose a basic nomenclature of abbreviations for the most common paleomagnetic data to merge different data formats. For this purpose, we introduce a set of automatization routines for paleomagnetic data conversion. Our routines bring several data formats into a common data format (pmob), and also allow reversion into selected formats. We propose creating similar routines for all existing paleomagnetic data formats; our suite of computation tools will provide the basis to facilitate the inclusion of further data formats. Furthermore, automatized data processing allows quality assessment of data.