



Aerogeophysical survey over Sør Rondane Mountains and its implications for revealing the tectonic evolution of East Antarctica

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We are presenting new magnetic and gravity data of a high-resolution aerogeophysical survey over the area of the Sør Rondane Mountains in the eastern Dronning Maud Land (DML). The aircraft survey is part of the joint geological and geophysical GEA campaign (Geodynamic Evolution of East Antarctica) of the Federal Agency for Geosciences and Natural Resources (BGR) and Alfred-Wegener-Institute for Polar and Marine Research (AWI), in cooperation with the Universities of Ghent, Bremen and Bergen. It was completed during the Antarctic summer season 2012/13, covering an area of more than 100000 square kilometer with a line spacing of 5 km. The data will be correlated with geological structures exposed in the mountain range as well as matched and merged with the data sets of the eastern and southern DML (acquired by AWI during the last decade) for comparison and discussion in the greater context of the tectonic evolution of East Antarctica.

Preliminary results show that the magnetic anomaly pattern over the Sør Rondane Mountains differs from the pattern found over the central DML mountains as well as from the low amplitude pattern in between both regions, indicating a significant difference in the evolution of this region, which is in accordance with latest geological findings in this region.