



GeoForschungsZentrum Anomaly Magnetic Map (GAMMA): Candidate model for the WDMAM

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The World Digital Magnetic Anomaly Map (WDMAM) is an ongoing effort towards the mapping of worldwide available aeromagnetic data. It is led by a task force of the International Association for Geomagnetism and Aeronomy (IAGA) and aims at distributing a global map in a paper and a digital form. We present our candidate model. After discussing the quality of the available data, we apply a simple but effective method to successfully process, reduce and merge together individual compilations. The near surface data are corrected using global field models and further refined with a 2D polynomial corrections. After the upward continuation to 5km altitude, data are merged together and resample to a 3 minutes grid. We then calculate a Spherical Harmonic model up to degree 500 and analyze the magnetic spectrum of the global map. We substitute degrees 1 to 100 by a satellite based lithospheric field model (MF5).