

3.5.6 Global Geophysical Fluids Center (GGFC)

Established by the International Earth Rotation Service (IERS) on January 1, 1998, the Global Geophysical Fluids Center (GGFC) has the responsibility of supporting, facilitating, and providing services to the worldwide research community in areas related to the variations in Earth rotation, gravitational field and geocenter that are caused by mass transport in the geophysical fluids and the induced loading effects.

Under the GGFC, eight Special Bureaus (SB) were established. They are SB for Atmosphere, Oceans, Hydrology, Tides, Mantle, Core, Loading, and Gravity/Geocenter (see below). Angular momenta and the related torques, gravitational coefficients, geocenter shift, and surface loading deformation fields will be computed for all geophysical fluids based on global observational data, and/or products from state-of-the-art models some of which assimilate such data. The computed quantities, algorithm and data formats will be standardized. The data products are, and additional ones will be, archived and made available to the scientific research community.

During 2003, a major modification of the GGFC portal website was done, giving it a more modern look and a more efficient organization of presenting information.

An article based upon a paper given at the 2002 IERS Workshop on Combination Research and Global Geophysical Fluids held in Munich, Germany, November 18 - 21, 2002, was published in 2003. Along with another earlier article, it is now posted in the GGFC website. They are (courtesy of the American Geophysical Union) :

Chao, B. F., V. Dehant, R. S. Gross, R. D. Ray, D. A. Salstein, M. M. Watkins, and C. R. Wilson, Space geodesy monitors mass transports in global geophysical fluids, EOS, Trans. Amer. Geophys. Union, 81, 247–250, 2000.

Chao, B. F., Geodesy is not just for static measurements any more, EOS, Trans. Amer. Geophys. Union, 84, 145–156, 2003.

A GGFC business meeting was held on December 8, 2003, during the American Geophysical Union's 2003 Fall Meeting in San Francisco. It was participated by all but one SB chairs, IERS DB members Bernd Richter and Markus Rothacher, ITRS Centre representative Zuheir Altamimi, as well as many interested scientists. Status of IERS and all SBs were reported, funding and data archive issues were discussed, and several action items were proposed.

The Websites (see Appendix 4) contain detailed information of GGFC and the SBs, including description and availability of archived data, useful graphics, members/associates list, call for participation, planned activities, and bibliography, etc.

Detail reports from each SB follow.

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