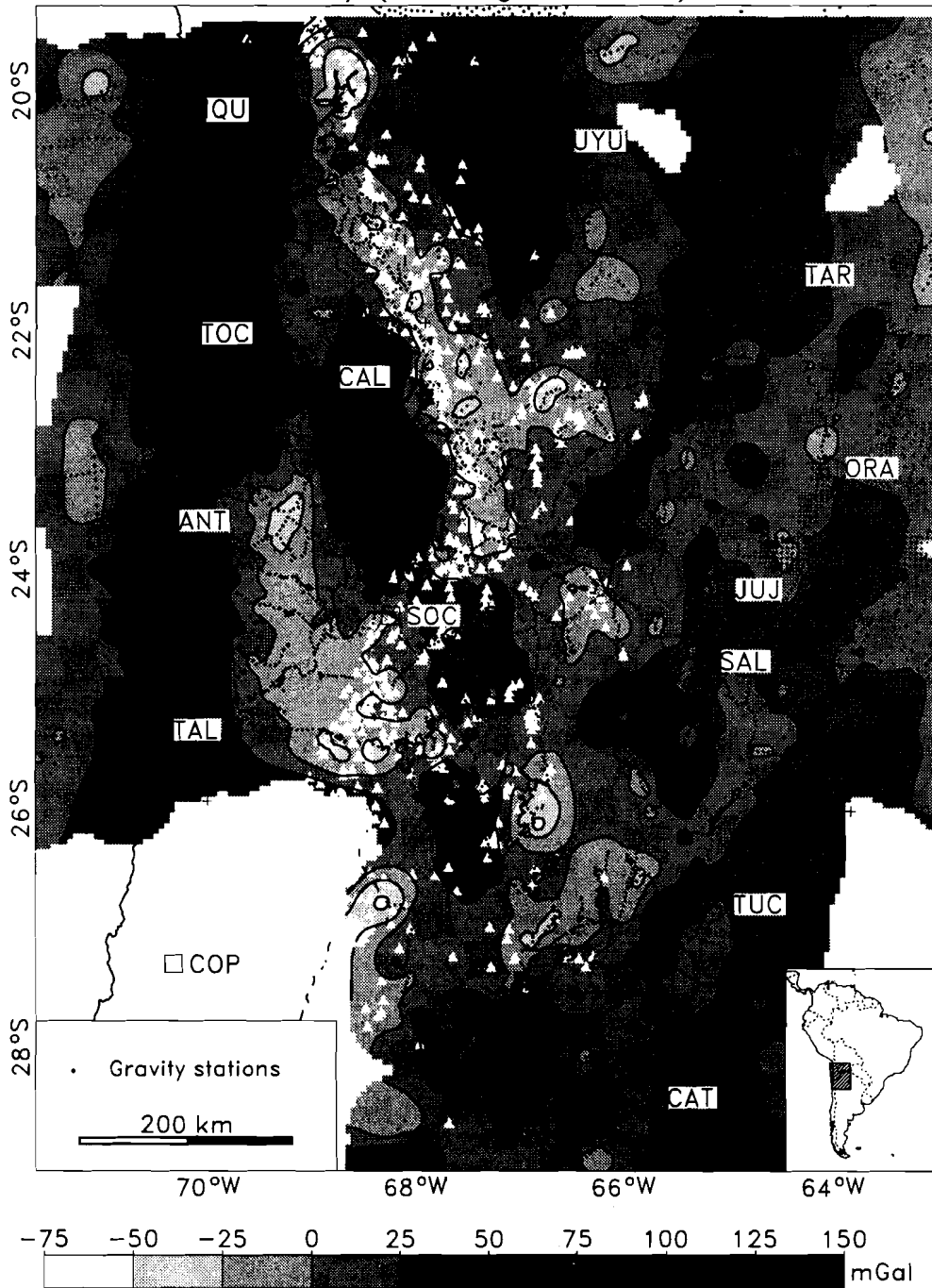


Isostatic Anomaly (Vening Meinesz)



11.03.1996(UTM Projection: -69, Scale 1 : 6666667)

Figure 1: Residual gravity field of the Central Andes. Contour lines 10 mGal. Database is shown together with volcanos and other geographical features.

geoid anomaly (undulation) of 50 - 60 m is caused by Andean topography and isostatic roots. However, also density inhomogeneities in the downgoing slab and in the asthenospheric wedge contribute to undulations of the Earth's geoid in the Central Andes. All 3D density modelling has been proven by the results of refraction seismics (e.g. Wigger et al., 1994). Please, refer also to poster Kirchner, Götze, Lessel and Schmitz (this issue).

CONCLUSIONS

The updated gravity data base will play an important role in both local investigations of applied geophysics and regional interdisciplinary interpretations of pure geophysics. Andean gravity field seems to be a sensitive indicator which is linked to many processes contributing to the tectonic framework of the Nazca plate subduction zone.

MIGRA data sets are available via FTP for non commercial applications of universities and governmental agencies. You may contact H.-J. Götze at Freie Universität Berlin (Germany) under "hajo@zedat.fu-berlin.de" or refer to the "Gravity Research Group's" Home page on the WWW for further information: - <http://fub46.zedat.fu-berlin.de:8080/~wwwgravi>.

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