



## **The new (tele cabin /land) national gravity calibration line for Iran**

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### **Abstract**

Gravity calibration line is needed for the accurate calibration of relative gravimeters before they are taken into the field. The existing calibration lines in Iran, used to calibrate gravimeters up until now, contain a selection of stations from the Gravity Base Net of Iran. These calibration lines run north-south along the whole country, and the points are widely spaced; it is thus quite expensive to use them because it is

necessary to employ an aircraft to transport the gravimeter from point to point.

Hence, we started looking into the establishment of an alternative calibration line. Two lines were considered: one connecting the National Cartographic Centre (NCC) with Tochal (a 2800m high mountain above Tehran connected with Tehran by a cable car), and one on the northern slopes of Elburz Mountain chain. It turns out that a combination of these two lines: Tochal-NCC and NCC-Astara (located at the southern shore of Caspian Sea), has a very large gravity difference of 1215 mgals. This difference covers all the gravity values encountered in Iran, as well as in the neighbouring countries, except for the summit of Mount Damavand,. Therefore, this combined line can become also a handy facility for our neighbors to use for calibrating their own gravimeters.