

Sagarmatha (Mt. Everest) Height Measurement

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SUMMARY

The highest peak of the world, Mt. Everest was given its height of 8848 m in 1954 by Survey of India. Since then, different observation on the height was made giving different heights. But 8848 is the world recognized height of the Everest. After the earthquake in 2015, there was a question on the height of the Everest if it shrank or it rose. Survey Department, Government of Nepal took initiation to conduct height measurement by preparing the methodology and finalizing it through the international workshop. Accordingly, the field work was started from 2018. The field work has almost come to the end. Precise leveling has been conducted from Nepal-India border area to the three stations among the twelve stations from which the Everest observation will be made as trigonometrical leveling. The precise height from those three stations will be carried to remaining nine stations. Besides this, Gravity and GNSS survey has been conducted in 297 control stations systematically distributed in this region. For this, whole of the Everest region considering Everest at middle, a 100 km stretch as 50 km east and 50 km west of the peak from north to south of Nepal is divided into grids of 10X10 km at mountains and 25X25 km at plains. These data will be used to define the precise GEOID of this region. GNSS observation has already been conducted at the top of the Everest. The GEOID so defined will be used to get the mean sea level height of the orthometric height from the ellipsoidal height got from GNSS survey at the top. The new height of the Everest is expected to come early 2020.

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