

PROPERTIES OF EAS GONIOMETER GTU

All definitions of the values and functions used see in the part «GONIOMETER'S GENERIC PROPERTIES»
 The GTU goniometer is conserved now
 Georgian Technical University, Tbilisi, Georgia



Location of the GTU installation

Latitude	41.723406°N
Longitude	44.777440°E
Altitude	(450 ± 5) m above sea level
Upright atmospheric mass depth	$X_{GTU}^{\uparrow} = ??? \text{ g/cm}^2$
Air density at this location	$\rho_{GTU} = ??? \text{ g/m}^3$
and the corresponding multiple scattering unit	$rM_{GTU} = ???.?m$

The “pyramidal” detectors of GTU goniometer are located under the iron roof of forth building of Georgian Technical University in Tbilisi. The mass depth of this filter is accepted to be $X_{\text{filter}} = 0.78 \text{ g/cm}^2$ for all directions and the radiation length for the actual absorber's substance (iron) is accepted to be $T_{\text{filter}} = 13.9 \text{ g/cm}^2$

Number of detectors $N = 4$; $d = 0,1,2,3$

The areas of all plastic scintillator slabs are $S_d = 0.25m^2$; $\{SS_{AIP}\} = (S_0, S_1, S_2, S_3)$

The detectors' positions layout in the roof space is shown in the **figure 1**.

GTU goniometer's properties have to be evaluated later.

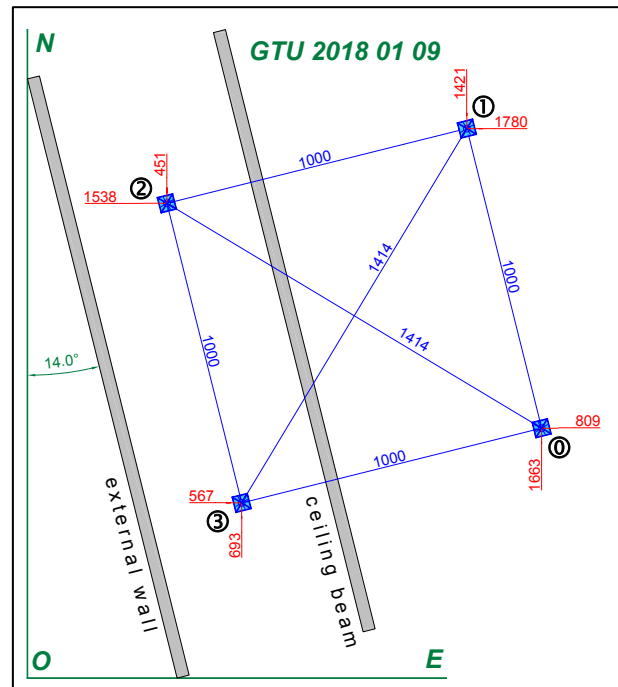


Figure 1 GTU array layout.
 All linear dimensions are measured in centimeters.