

## International partners

### Repetition of Eratosthenes' experiment

Locality: 4<sup>th</sup> High School of Drama, Greece

Latitude:  $\varphi = 41^\circ 9'$

Longitude:  $\lambda = 24^\circ 9'$

Date: 20-6-2011 (Summer solstice)

Time of the Sun's culmination in Drama: 13:24:52 (UTC +3:00)

Height of the vertical rod: 31,2 cm  $\pm$  0,1 cm

Shadow of the rod: 9,6 cm  $\pm$  0,2 cm

$\tan \omega = 9,6 : 31,2 = 0,308$

$\omega = 17^\circ 7' \pm 20'$

Distance between Drama and Aswan along a meridian circle= 1960 km (Google Earth)

Circumference of the Earth:  $360^\circ \times 1960 / 17^\circ 7' = 41.200 \text{ km} \pm 1000 \text{ km}$

### Repetition of Eratosthenes' experiment

Locality: 4<sup>th</sup> High School of Drama, Greece

Latitude:  $\varphi = 41^\circ 9'$

Longitude:  $\lambda = 24^\circ 9'$

Date: 21-6-2011 (Summer solstice)

Time of the Sun's culmination in Drama:

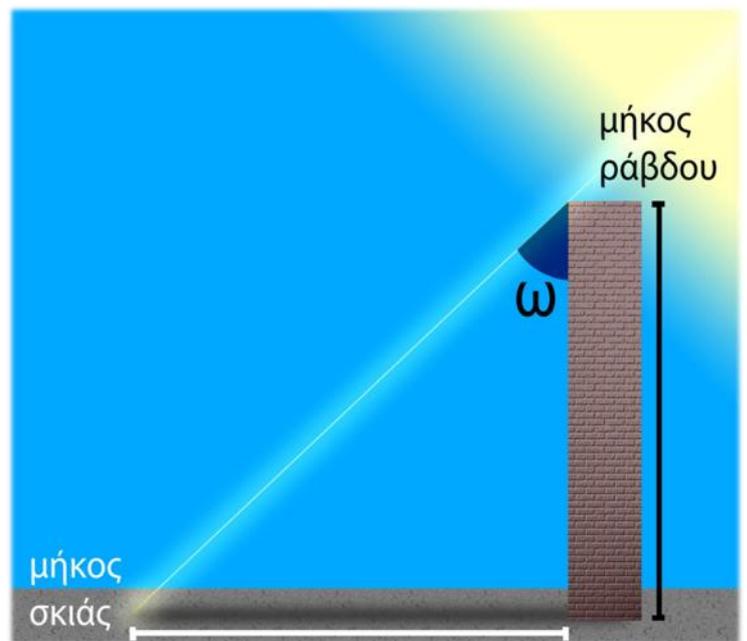
13:25:05 (UTC +3:00)

Height of the vertical rod: 13,2 cm  $\pm$  0,1 cm

Shadow of the rod: 4,4 cm  $\pm$  0,2 cm

$\tan \omega = 4,4 : 13,2 = 0,33$

$\omega = 18^\circ 15' \pm 20'$



Distance between Drama and Aswan along a meridian circle= 1960 km (Google Earth)

Circumference of the Earth:  $360^\circ \times 1960 / 18^\circ 15' = 38.700 \text{ km} \pm 1000 \text{ km}$

