# Information Needed for GLONASS-125 CoM Correction

- The satellite reference frame is centered in the satellite CoM,
- The X axis direction is from Earth
- The Y axis direction is from Sun
- The Z axis direction is in accordance with right-handed coordinate system.
- The geometrical center of the RRA base plane is at a distance of x= -1465.4 mm along the spacecraft long axis, and at a distance of 0…10 mm relative to the transverse axis.
- The distance from the CCR face plane to the base plane on the spacecraft is 36 mm.
- The CCR prism height is 19.1 mm.
- For the operation wavelength λ=532nm, using the ground velocity of light (index of refraction 1.4857447 we obtain the CoM correction value Δc related to the laser bean elevation angle:

Elevation angle (deg)	90	80	70	60	50	40	30	20	10
Δc (mm)	1473.02	1471.615	1467.57	1461.34	1453.67	1445.46	1437.705	1431.35	1427.185
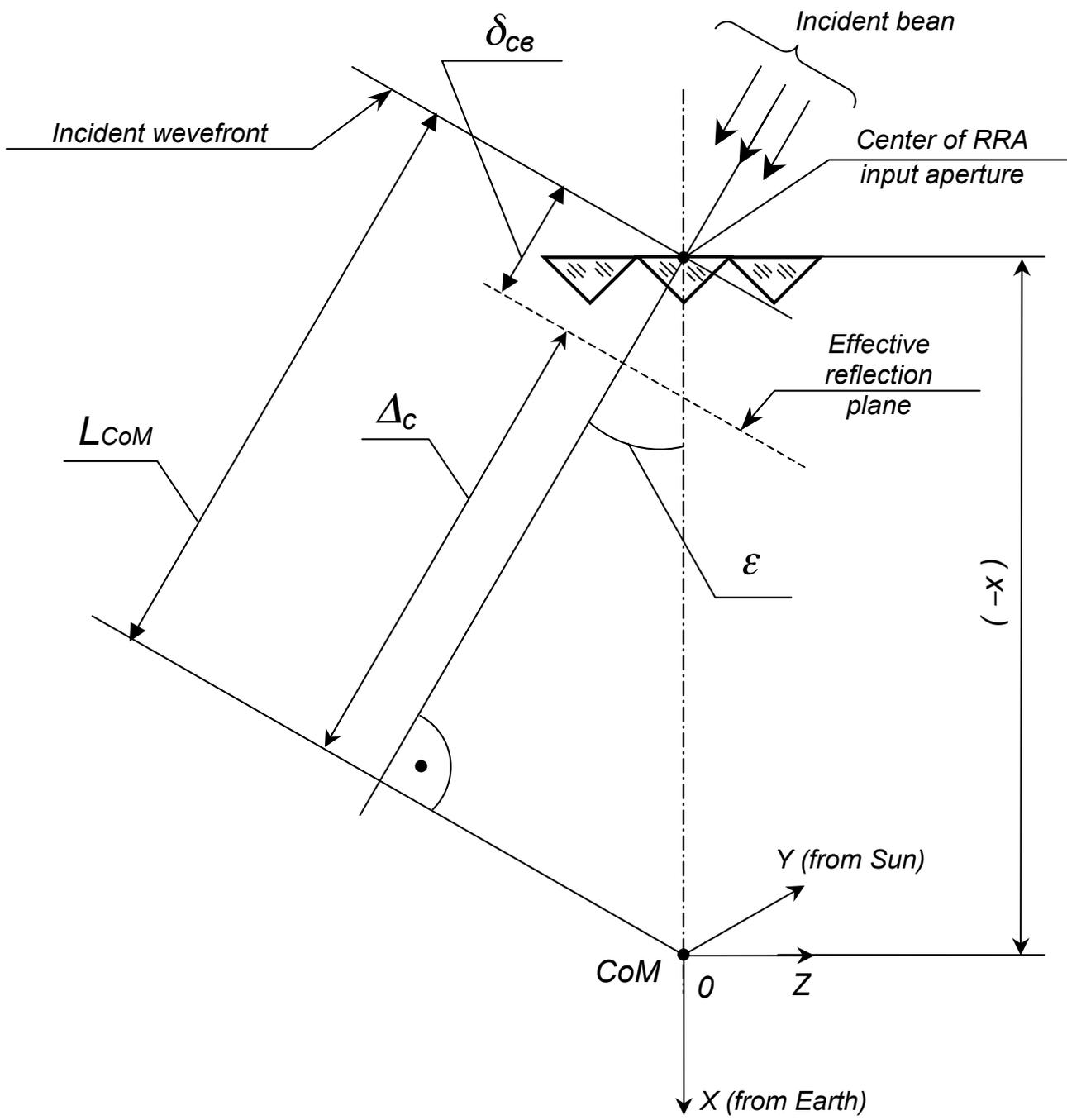
$$\delta_{\tilde{N}\hat{A}} = h_{\tilde{N}\hat{A}} * \sqrt{n^2 - (\sin^2 \varepsilon)}$$

Range measurement reduction to CoM