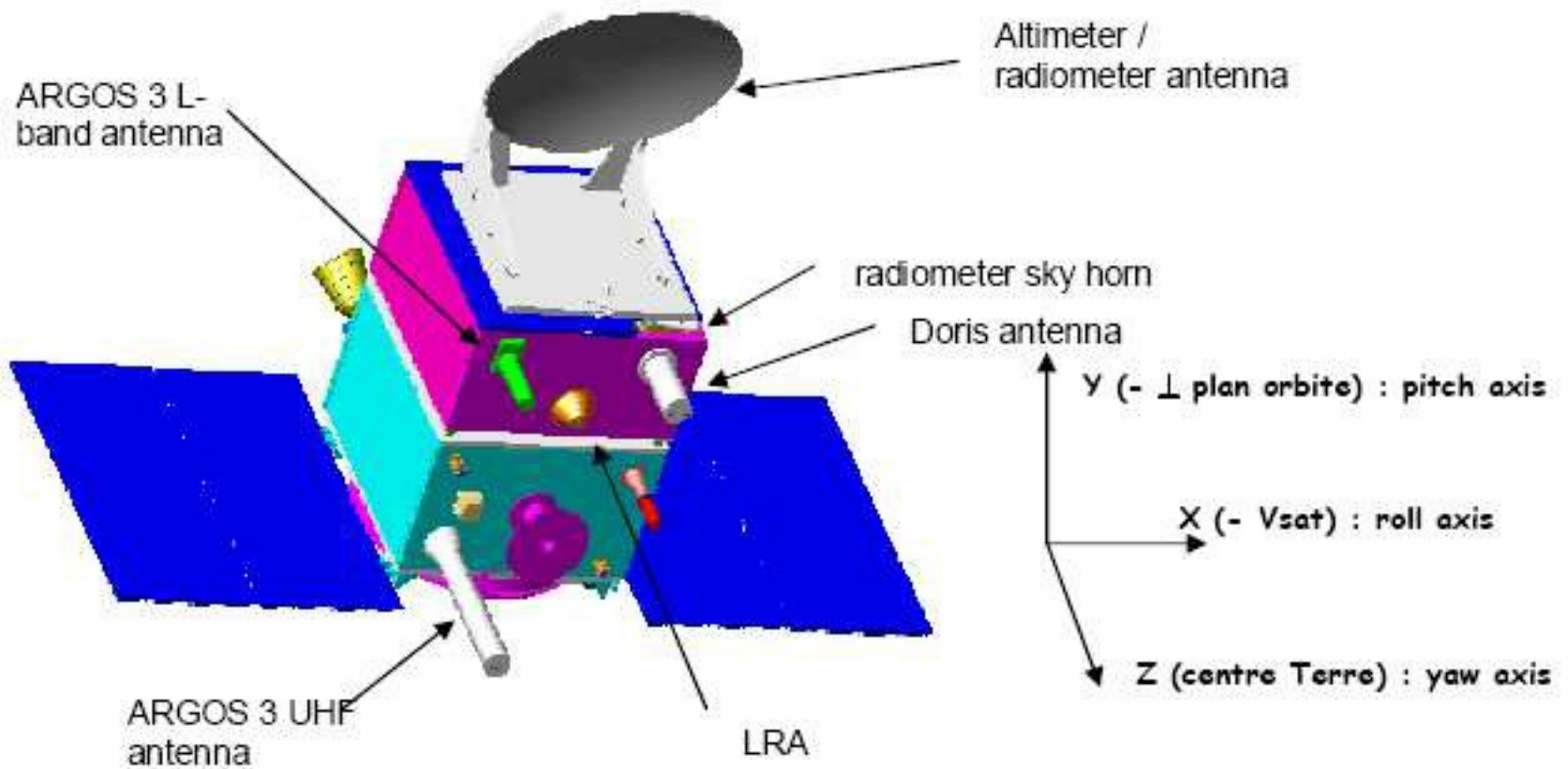
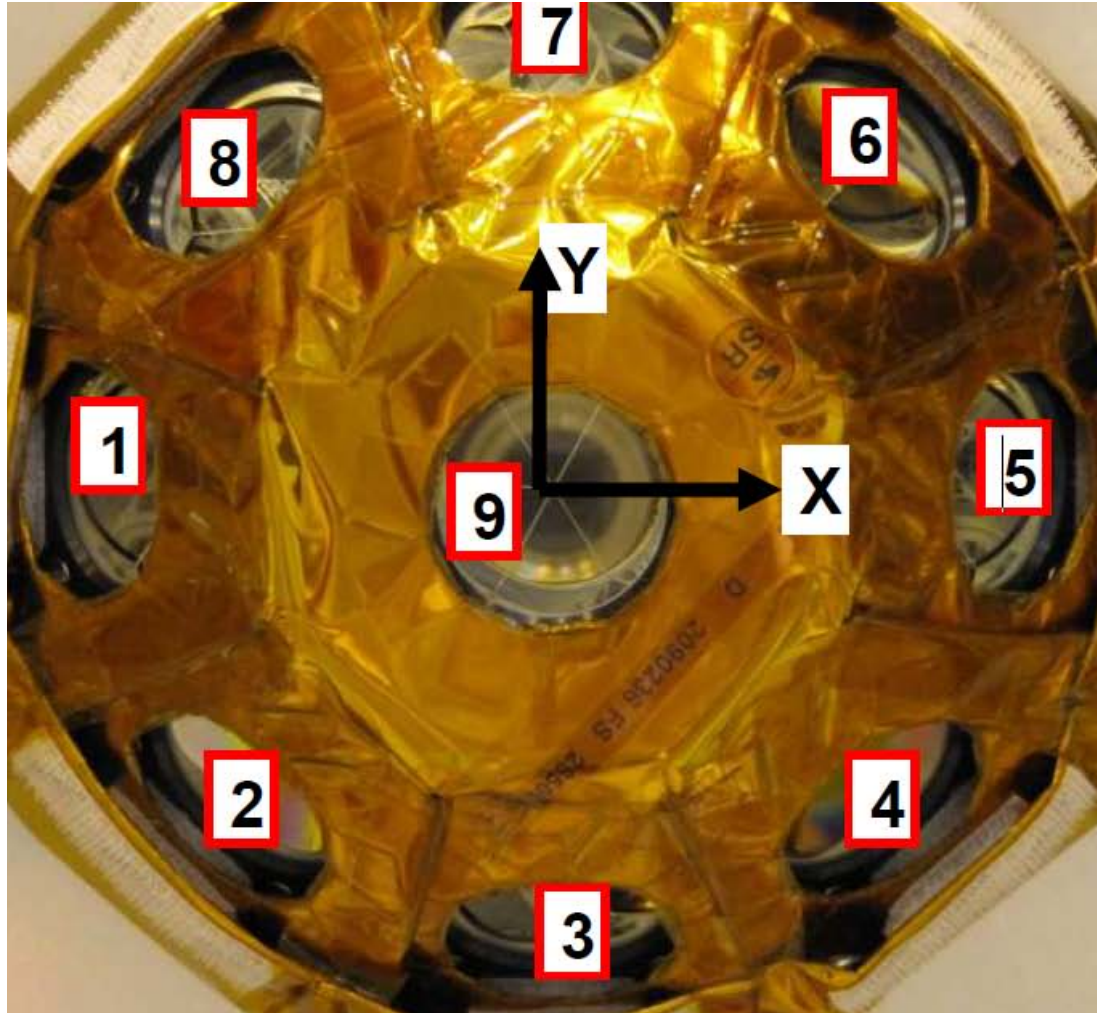


AltiKa

from CNES' document

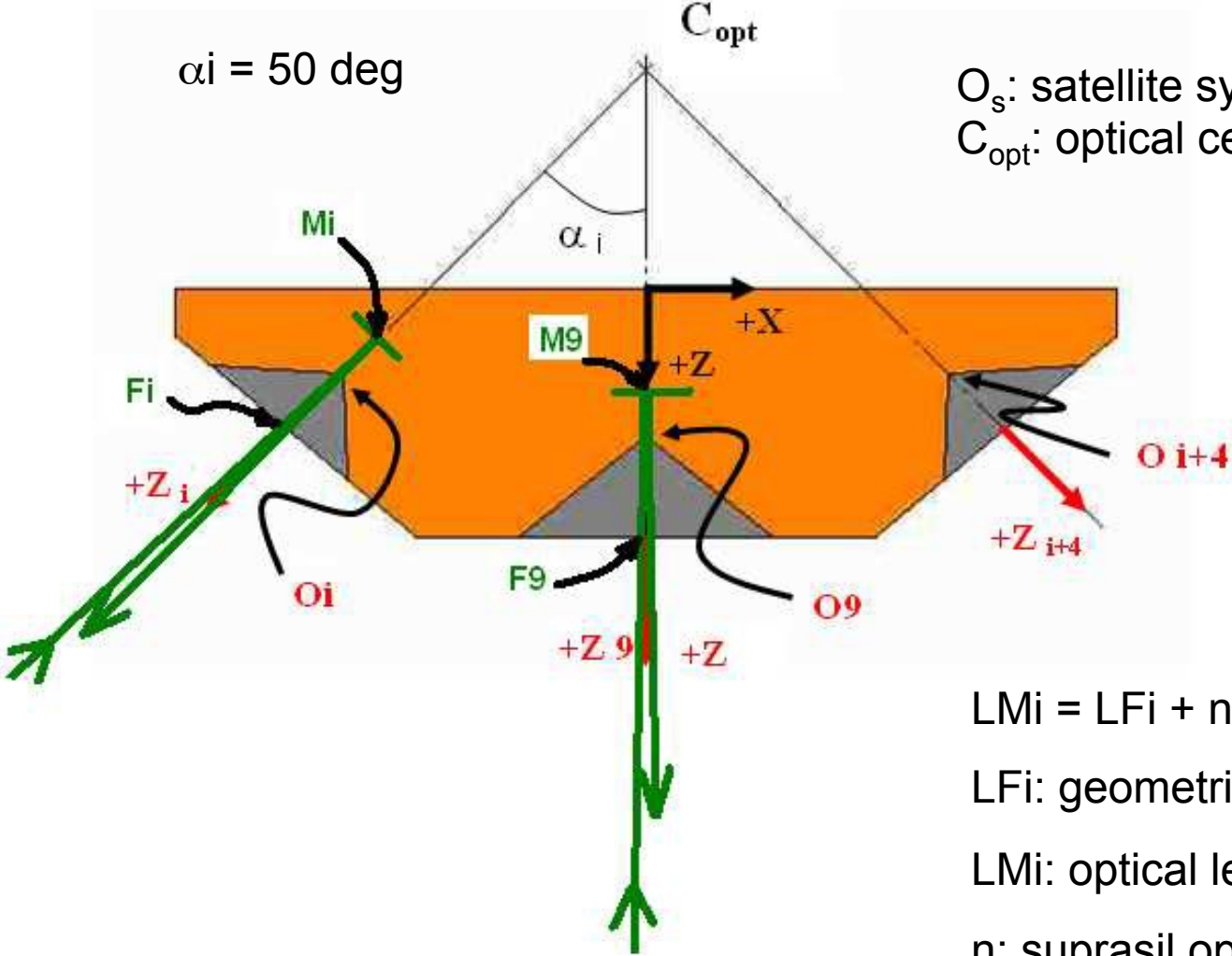


The Laser Reflector Array (LRA)



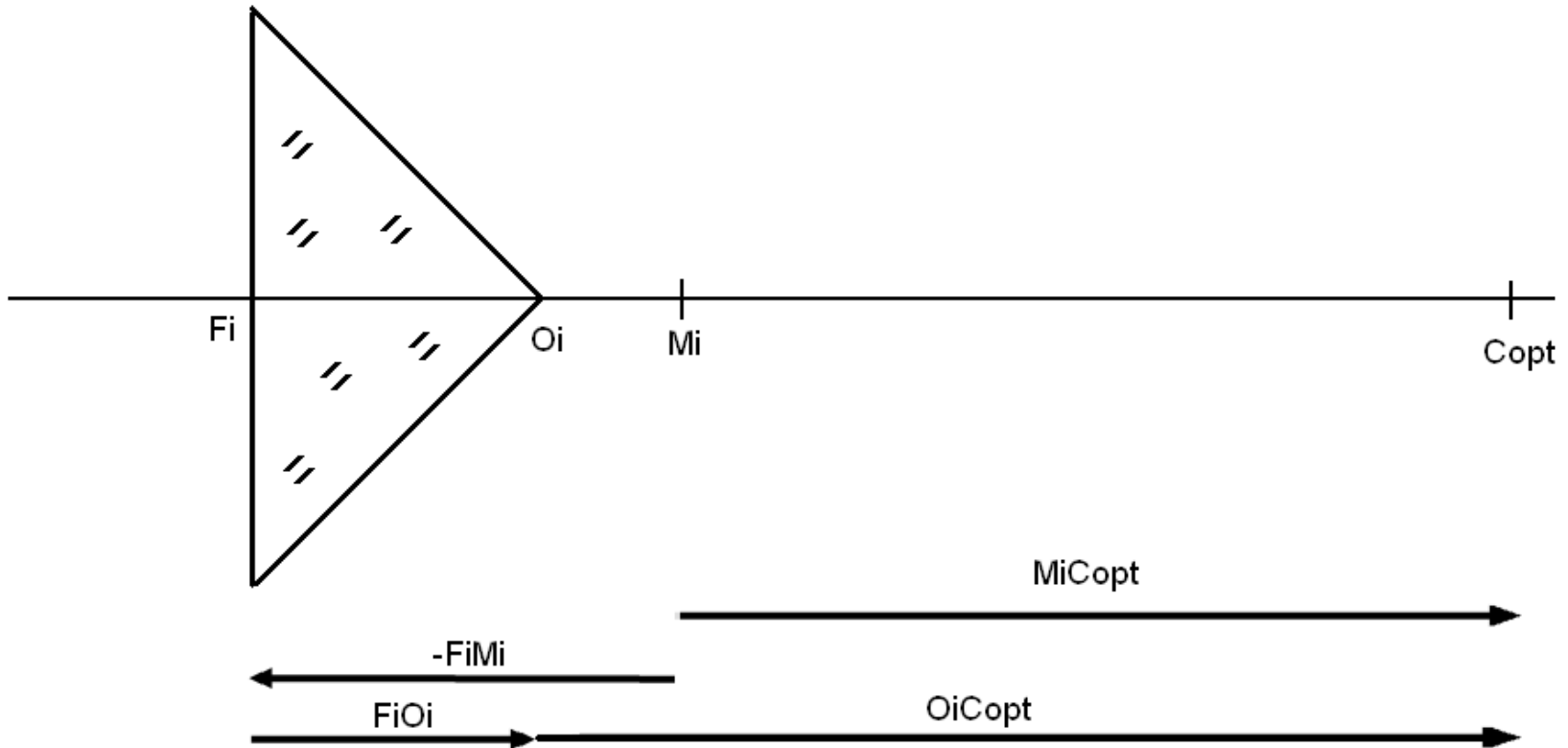
$O_s C_{opt} : X = 0.0 \pm 0.15 \text{ mm}$
 $Y = 0.0 \pm 0.15 \text{ mm}$
 $Z =$

O_s : satellite system origin
 C_{opt} : optical center



$LM_i = LFi + n FiO_i$
 LF_i : geometrical length to face i
 LM_i : optical length
 n : suprasil optical index (=1.461)

Correction to the optical center

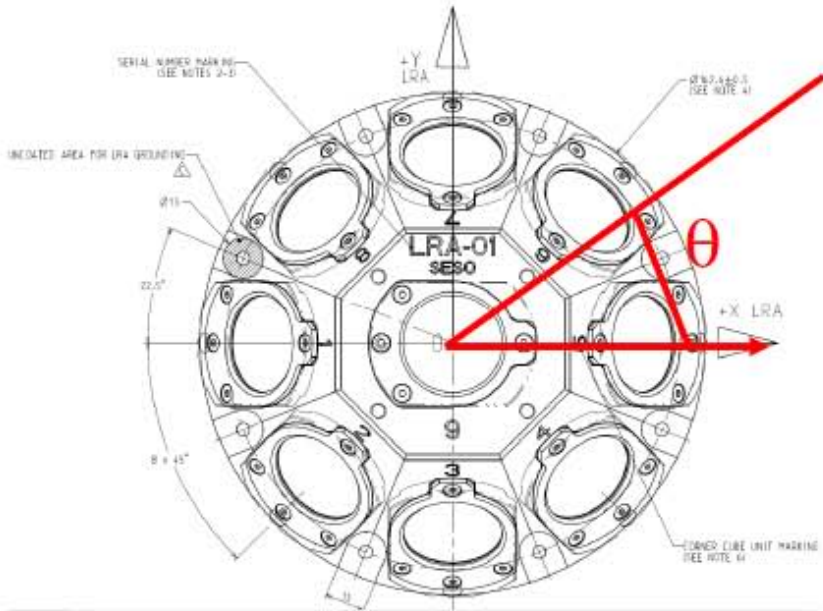


$F_i O_i = 24.3 \pm 0.1$ mm, except for corner cube 8: 24.45 mm

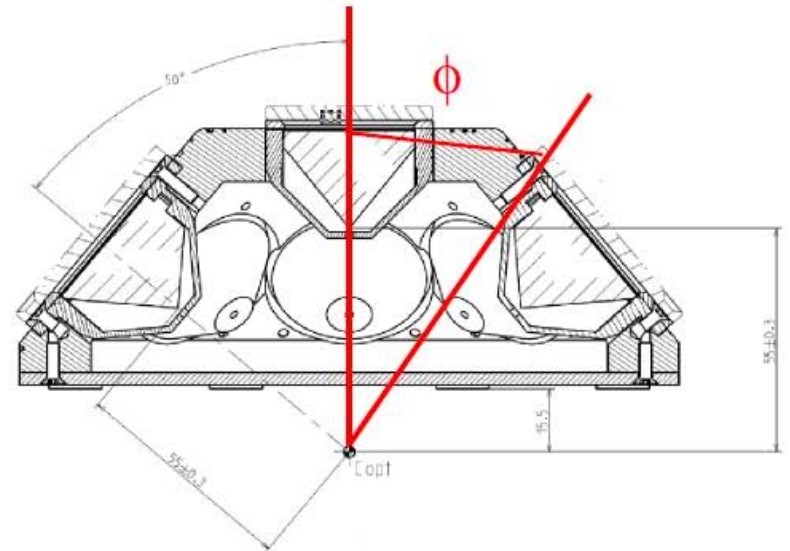
$F_i M_i = 35.5 \pm 0.1$ mm, except for corner cube 8: 35.72 mm

$O_i C_{opt} = 55.0 \pm 0.1$ mm, except for corner cube 8: 54.6 mm

$M_i C_{opt} = 43.8 \pm 0.1$ mm, except for corner cube 8: 43.4 mm

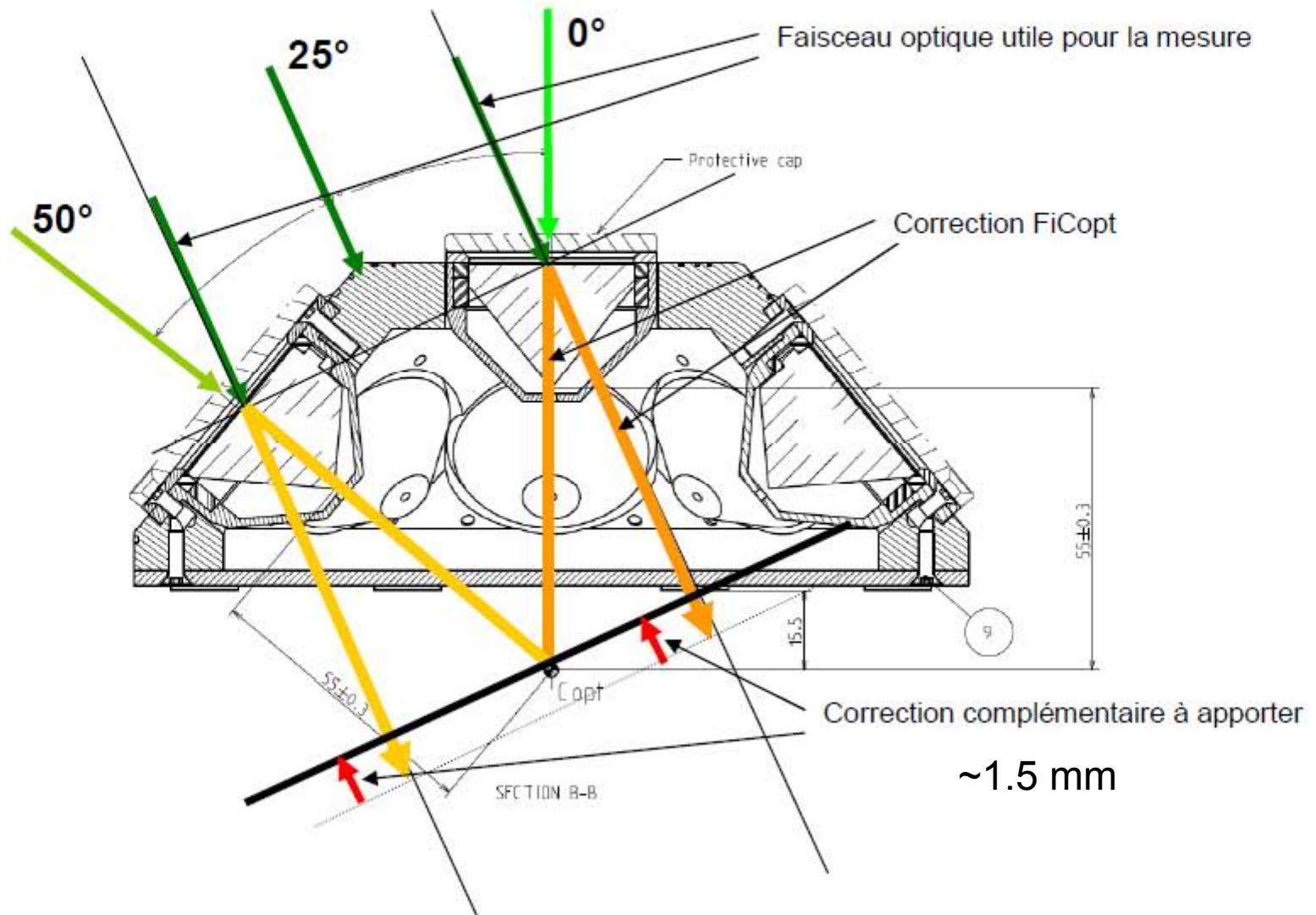


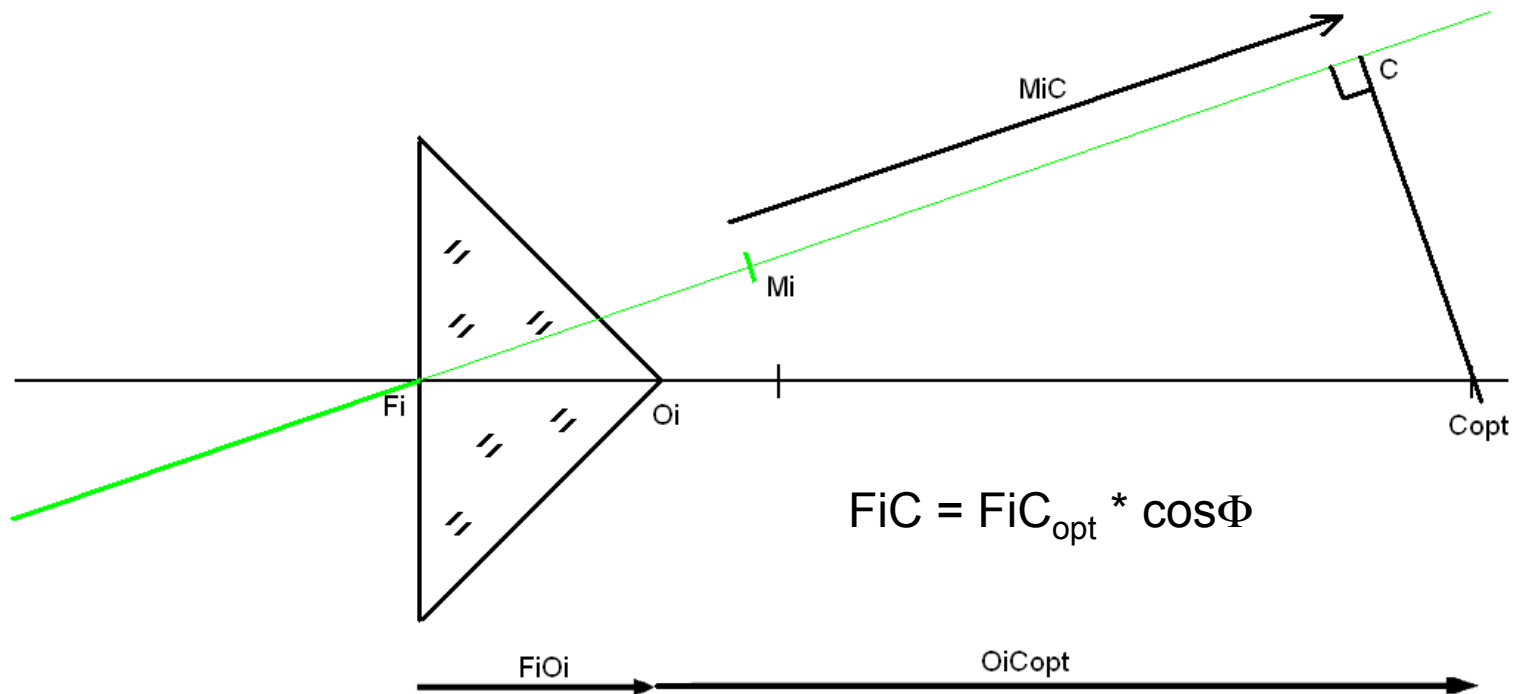
θ = azimuth angle



Φ = incidence angle

Incidence correction





angle incident en degrés	chemin optique FiMi en mm
0	35,50
1	35,50
2	35,49
3	35,48
4	35,46
5	35,44
6	35,41
7	35,38
8	35,34
9	35,30

angle incident en degrés	chemin optique FiMi en mm
10	35,25
11	35,20
12	35,14
13	35,08
14	35,01
15	34,94
16	34,86
17	34,78
18	34,70
19	34,61

angle incident en degrés	chemin optique FiMi en mm
20	34,52
21	34,42
22	34,32
23	34,21
24	34,10
25	33,98
26	33,87
27	33,74
28	33,62

Flux budget

- normal incidence: 0 deg
 - laser beam divergence: 7 as
 - satellite altitude: 800 km
 - laser energy: 23 mJ
 - telescope diameter: 0.2 m
 - telescope efficiency: 5.1%
- link budget: 194 000 photons

50 deg

82 000 photons

