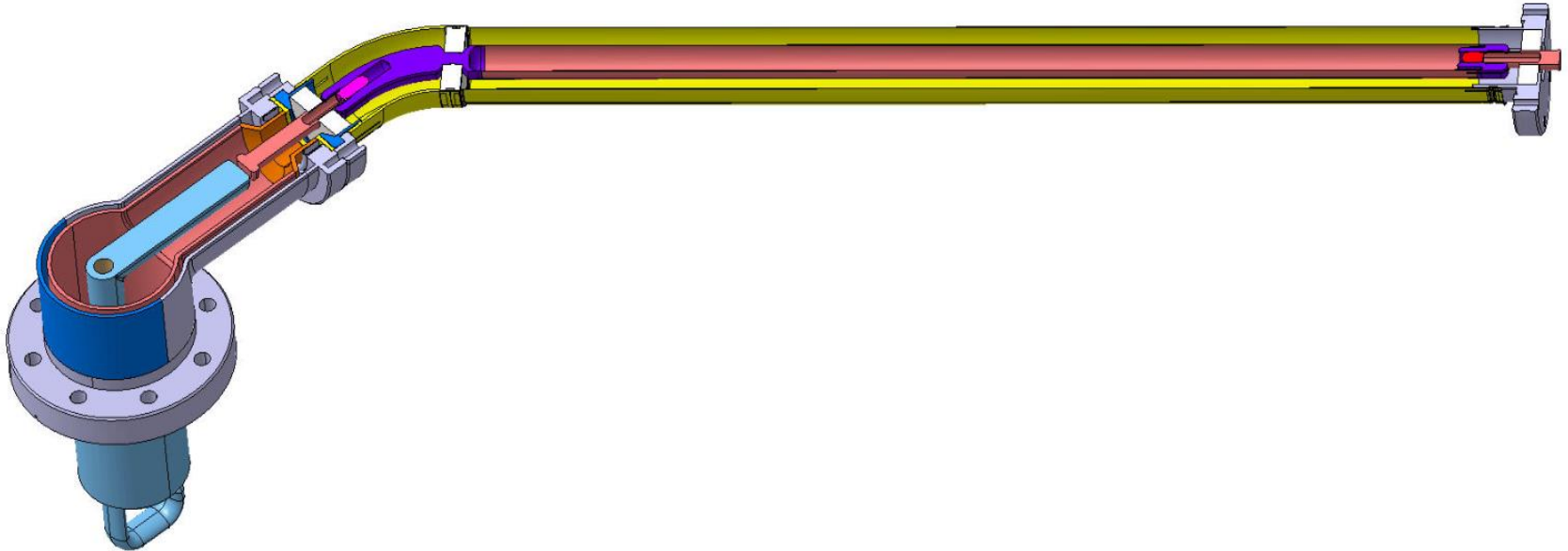


ODU wave guide for the HOM

Federico CARRA

31st July 2014

Geometry and materials



- Two tubes in stainless steel, with Cu coating $5\mu\text{m}$ (calculation done also without coating)
- $D1 = 40\text{ mm}$, $D2 = 17.4\text{ mm}$, $t = 0.3\text{ mm}$. $L = 400\text{ mm}$ (ODU) or 540 mm (BNL)
- Results referred to a geometry with optimized heat interceptor (80K, placed at $x/L = 26\%$ from the warm extremity)

ODU

	Static losses	Dynamic losses
Q_{bath} with Cu coating	0.374 W	Outer connector = 0.283 W Inner connector = ongoing
Q_{bath} without Cu coating	0.166 W	Outer connector = 0.445W Inner connector = ongoing