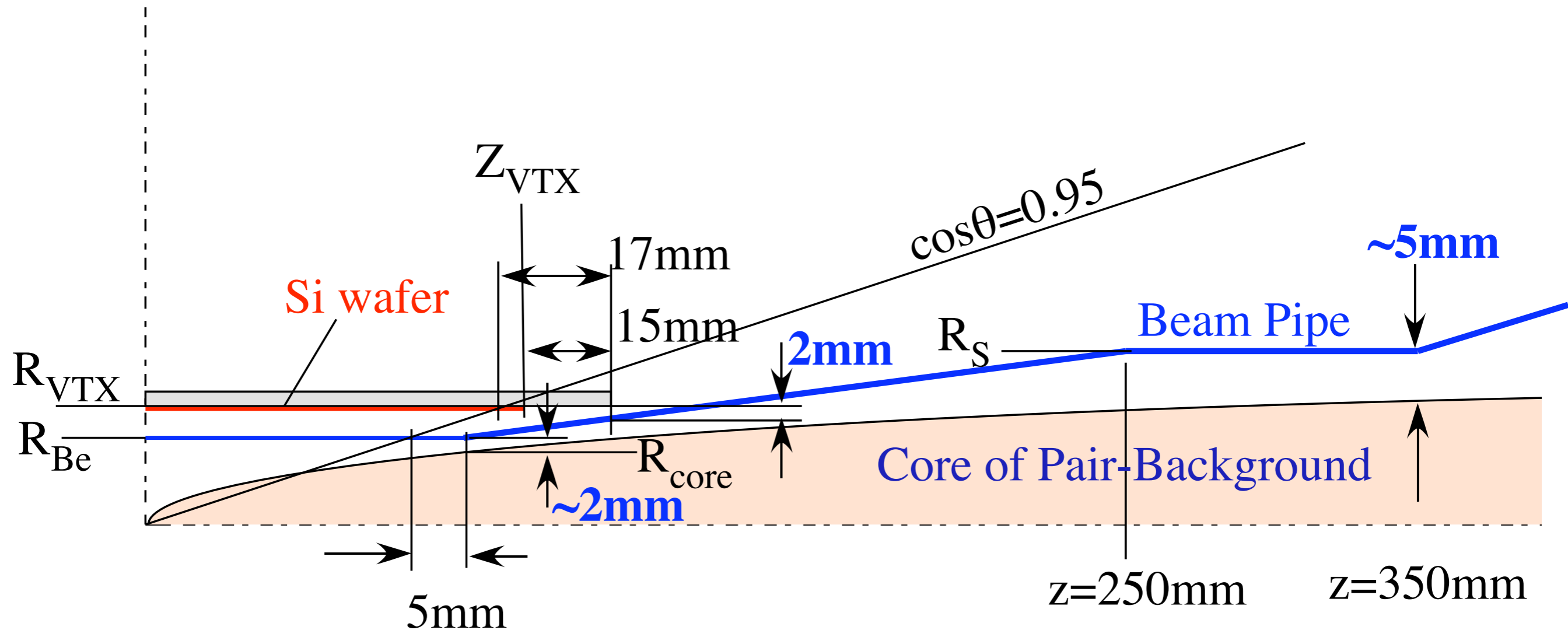


# Interaction Region (IR) Design

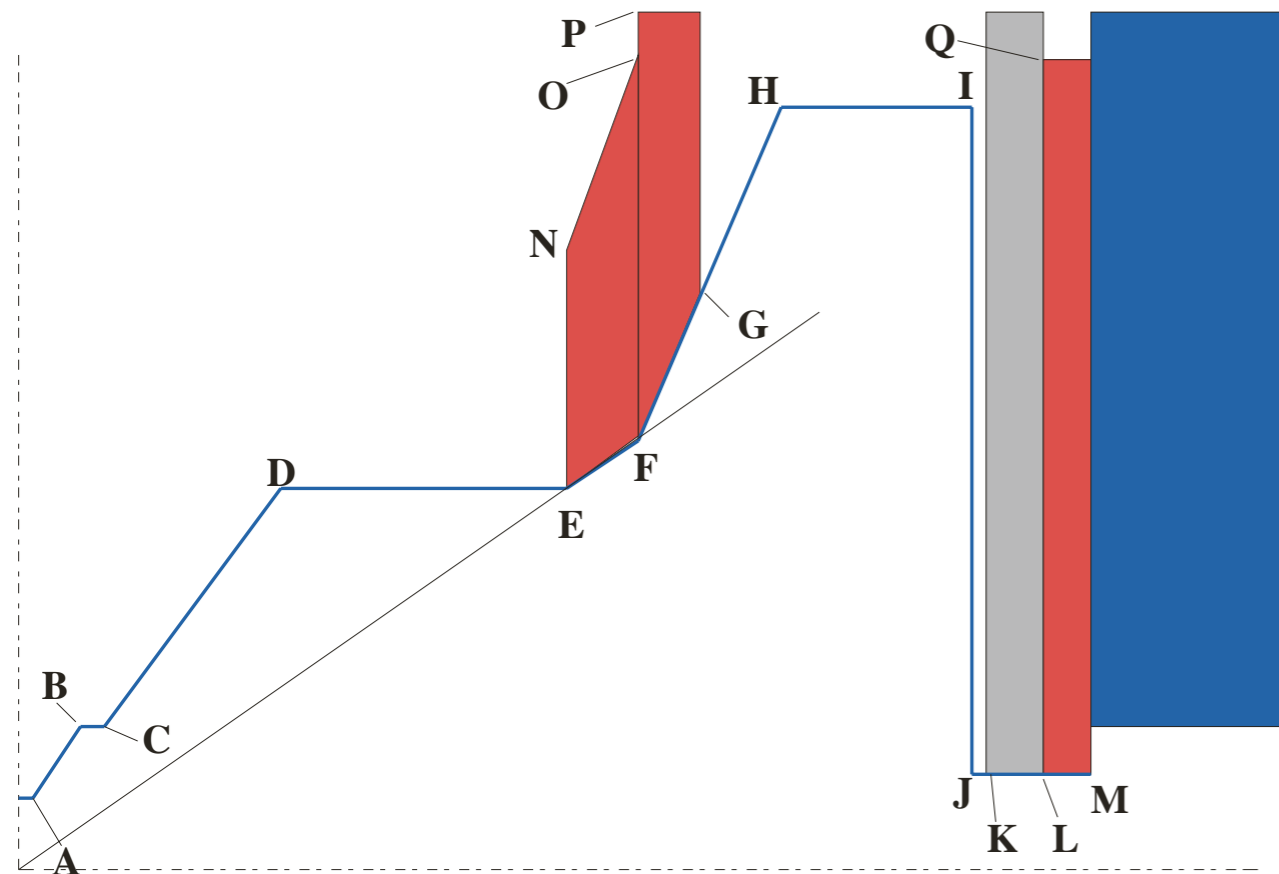
## Beam Pipes etc.



# Interaction Region (IR) Design

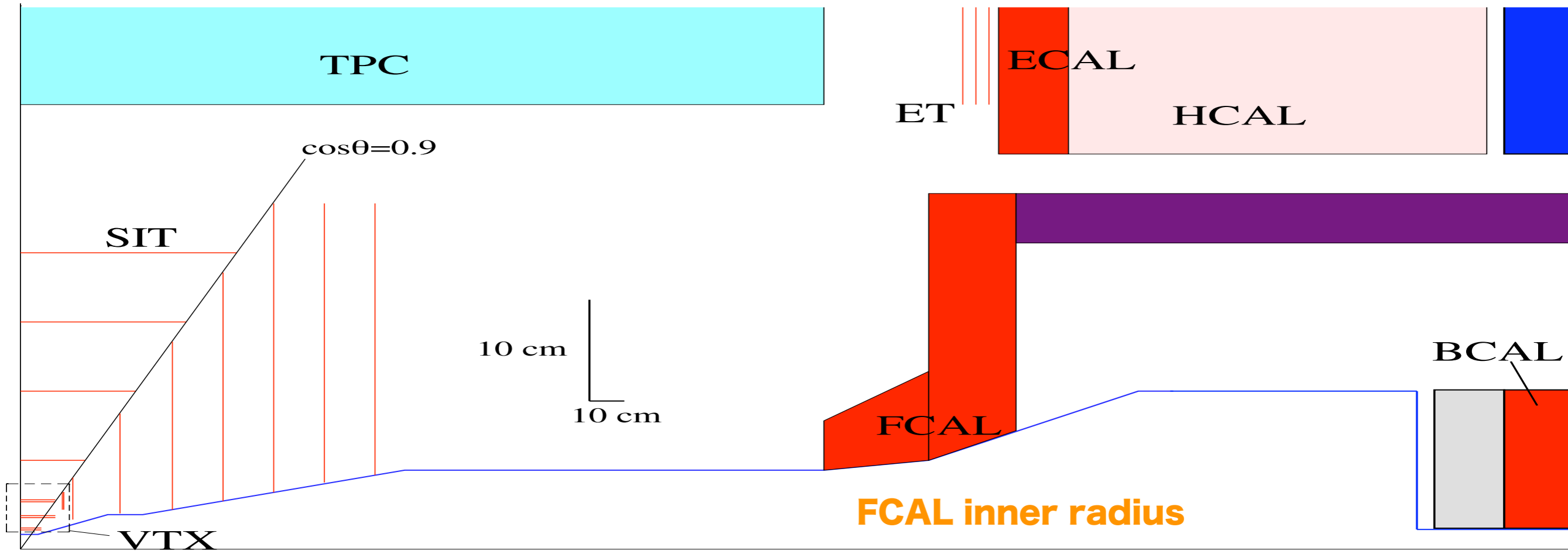
Table 2: IR geometrical data with 2 (20)mrad crossing angle; numbers in parentheses are those at 20 mrad crossing angle, while the others are common at the both angles.

**Standard**



$E_{cm}$	500GeV				1TeV	
	Nominal		High Luminosity		High Luminosity-1	
para.set	R in cm	Z in cm	R in cm	Z in cm	R in cm	Z in cm
position	R in cm	Z in cm	R in cm	Z in cm	R in cm	Z in cm
A	1.3	4.5	1.9	6.3	1.5	5
B	3(3.2)	25	4.2	25	3.4(3.5)	25
C	3(3.2)	35	4.2	35	3.4(3.5)	35
D	8	110	9(10)	110	8(9)	110
E	8	230	9(10)	230	8(9)	230
F	9.04	260	10.2(11.3)	260	9.04	260
G	11.94	285	12.60(13.26)	285	11.94(12.60)	285
H	16	320	16	320	16	320
I	16	400	16	400	16	400
J	2(2*)	400	2(2*)	400	2(2*)	400
K	2(2*)	405	2(2*)	405	2(2*)	405
L	2(2*)	430	2(2*)	430	2(2*)	430
M	2(2*)	450	2(2*)	450	2(2*)	450
N	13	230	14(15)	230	13(14)	230
O	17.70	260	18.83(19.96)	260	17.70(18.83)	260
P	36	260	36	260	36	260
Q	17.96	430	19.83(21.70)	430	17.96(19.83)	430

\* : There are two holes with the same radius for incoming and exit beams at the 20mrad crossing angle.



**VTX inner radius**

2.3m

4.5m

# IR Optimization

FCAL inner radius for TPC background hits.

Hole radius of extraction to decrease backscattering.

Radius of beam pipe @VTX

