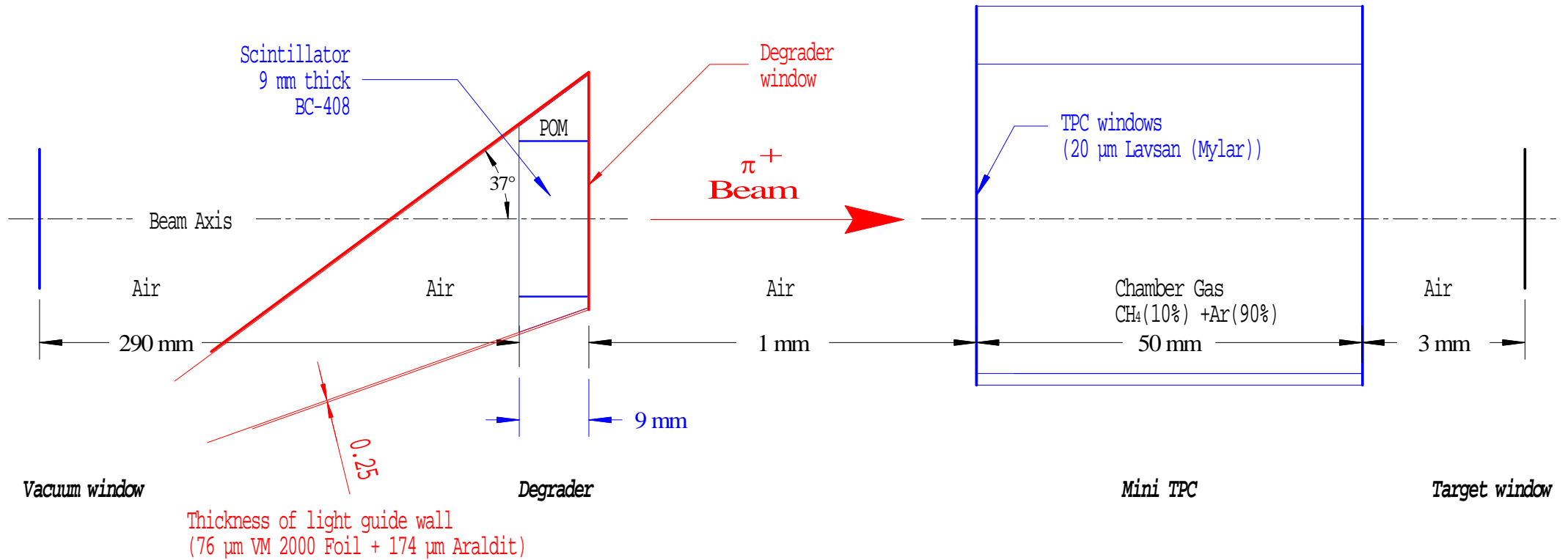


**Total material budget:**

1x	Thickness vacuum window: 75 $\mu\text{m}$ +/-1 $\mu\text{m}$ (75 $\mu\text{m}$ Mylar)	+ 1x	Scintillator: 9 mm +/-0.1 mm	+ 2x	Thickness of TPC window: 20 $\mu\text{m}$ +/-1 $\mu\text{m}$ (20 $\mu\text{m}$ Lavsan (Mylar))
+ 1x	Thickness of light guide wall: 250 $\mu\text{m}$ +/-10 $\mu\text{m}$ (76 $\mu\text{m}$ VM 2000 Foil + 174 $\mu\text{m}$ Araldit) x 1.7(37°)	+ 1x	Thickness of degrader window: 100 $\mu\text{m}$ +/-5 $\mu\text{m}$ (76 $\mu\text{m}$ VM 2000 Foil + 24 $\mu\text{m}$ black paint)	+ 1x	Thickness of target window: 100 $\mu\text{m}$ +/-5 $\mu\text{m}$ (76 $\mu\text{m}$ VM 2000 Foil + 24 $\mu\text{m}$ black paint)



Densities:

Mylar	1,380	$\text{g/cm}^3$
VM 2000 Foil	0,963	$\text{g/cm}^3$
Araldit	1,050	$\text{g/cm}^3$
Black Paint	2,100	$\text{g/cm}^3$
Scintillator	1,032	$\text{g/cm}^3$

Scintillation Properties BC-408

Light Output, %Anthracene	64
Rise Time, ns	0,9
Decay Time, ns	2,1
Pulse Width, FWHM, ns	~2,5
Wavelength of Maximum Emission, nm	425
Bulk Light Attenuation Length, cm	380

Allgemeintoleranz DIN 7168-H (±0.1)

POS.	ZEICH. Nr.	ANZ.	BESCHREIBUNG	MATERIAL	W.
			PROJEKT/TITEL: FBN Detector Setup 2010 Material Budget		
			MASSTAB:	BLATT:	
Bearb.	Datum		FILE: Degrader2010GeantVer3.xxx		