

BCAL Module Dimensions and Weights

Z.Papandreou, February 19, 2006

No of modules

48

Basic Dimensions (cm)			
Length	Outer radius	Inner radius	Aluminum
390	90	65	2.54

Calorimeter volume ratios			
Pb	SciFi	Glue	Total
0.37	0.49	0.14	1

Volumes (cm ³)				
Pb	SciFi	Glue	PbSciFi	Aluminum
1552322.21	2055778.061	587365.1604	4195465.432	552266.4662
Total check:			4195465.432	

Material Densities (g/cm ³)				
Pb	SciFi	Glue	PbSciFi	Aluminum
11.35	1.032	1.2	5	2.7

Component masses (gr)				
Pb	SciFi	Glue	PbSciFi	Aluminum
17618857.08	2121562.959	704838.1925	20445258.23	1491119.459

BCAL Mass	
Total Mass (kg)	21936.38
Total Mass (metric tons)	21.94
Mass per module (metric tons)	0.457

Numbers do not include bolts, fasteners or other such support.

BCAL Number of Fibers	
Scint Area	5271.225799 cm ²
Fiber Area	0.007853982 cm ²
No of Fibers	671153.3136
Km of Fibers	2617.497923

Numbers reflect the final, machined dimensions and do not include the amount of material needed for the construction, where there is waste due to final trimming and machining.

Numbers do not include contingency (spare modules)