



SOME RADIATION SAFETY DATA
PERSONNEL RADIATION DOSES

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RADIATION SAFETY STANDARDS FOR EXTERNAL PLUS INTERNAL DOSES

Whole body, head and trunk, active blood-forming organs, gonads, or lens of eyes	3 rem/calendar quarter
life dose not to exceed	5(N-18) rem*
Skin, thyroid and bone	7 1/2 rem/calendar quarter
Hands and forearms, feet and ankles	18 3/4 rem/calendar quarter
Other organs	3 3/4 rem/calendar quarter

* where N = age in years at last birthday

Note: If the radiation history of an individual is not known, then the whole body dose is limited to 1 1/4 rem/calendar quarter. Such rules-of-thumb as 2.5 mrem/hr, 20 mrem/day and 100 mrem/week derive from this lower limit.

PARTICLE FLUXES (particles cm⁻² sec⁻¹) FOR 1 MREM/HR

Energy GeV	Neutrons	Protons	Electrons	Photons	π+	π-
0.02	6.2			64.	1.	0.041
0.2	5.2	.6	5.1	9.2	1.9	1.5
2.	1.6	1.4	2.6	4.1	1.4	1.4
20.	.67	.58	1.7	3.5		
200.	.25	.23	1.4	3.		
500.	.19	.18				

Muons, minimum ionization = 8.7
 outside a thick shield (atten. > 10⁵) = 7.8

