Hi Dave,

The boundary dose rates for the He-4 target / 100 uA / 3 GeV beam were estimated in the Budget Form to be about 11 urem/h:

Hall: A **RADIATION BUDGET FORM** *page:* 1 of 1

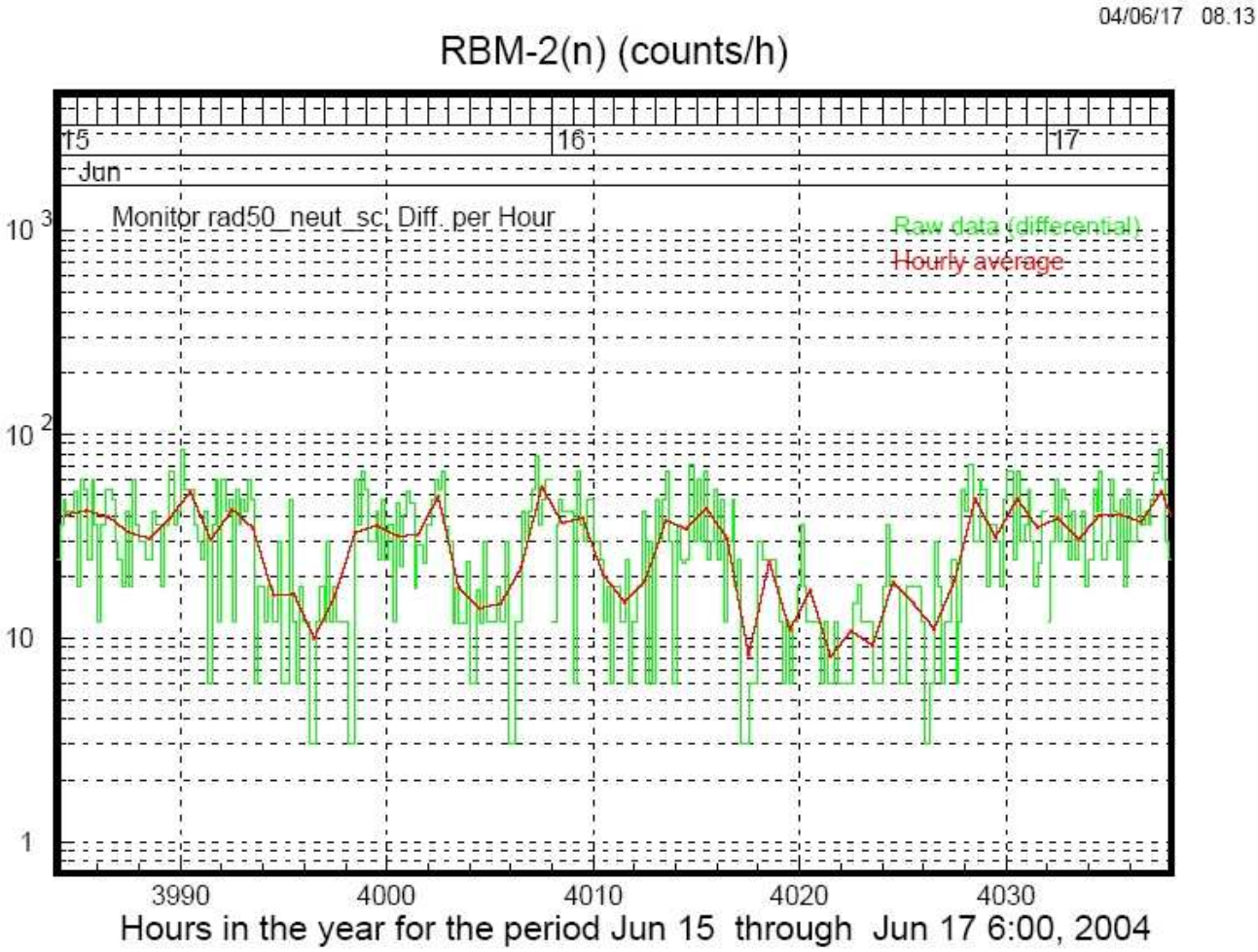
Exp. # E00-114 **rev: B** **run dates: 2004** **name of liaison: R. Michaels**

setup number			1	
beam	energy	GeV	3.036	*totals:*
	current	uA(CW)	100.0	
exp't target	element		He	
	thickness	mg/cm2	2500	
cryo tgt window	element		Al	
	thickness	mg/cm2	254	
time	run time	hours	144	144
	(100% eff.)	days	6.0	6.0
	installation	hours		0
	time	days	0.0	0.0
dose rate at the fence post (run time)	method 1	urem/hr	11.07	
	method 2	urem/hr		
	conservative	urem/hr	11.07	
dose per setup		urem	1595	1594.6
% of annual dose budget		%	15.9	15.946
			% of allowed dose for the total time	970.02
			% of allowed dose for the run time only	970.02

If > 200%, discuss result with Physics Research EH&S officer

date form issued: May 12, 2004 *authors:* P.Degtiarenko

Last night run at 30 uA has produced neutron count rates, at the RBM-2 position, about 35 counts/hour above background:



which corresponds to the neutron dose rate of 1.4 urem/h. The correction to accompanied gammas is plus 25%, thus the total dose rate estimate is 1.75 urem/h per 30 uA, or 5.8 urem/h per 100 uA. Compared to the expectation, it is 40-50% smaller, which is consistent with our previous observations. We keep this systematic overestimation in the budgets as an extra precaution, as we believe the systematics of the dose measurement is of the order of 30%.

Regards,
Pavel