

Hall: A

RADIATION BUDGET FORM

page: 1 of 1

Exp. # E12-07-109

rev: A

run dates: Fall 2024

name of liaison: B. Wojtsekhowski

(SBS-GEp)

setup number			1	2	3	4	totals:
beam	energy	GeV	6.6	8.8	11.0	4.4	
	current	uA(CW)	75.0	75.0	75.0	25.0	
exp't target	element		H	H	H	C	
	thickness	mg/cm2	2160.0	2160.0	2160.0	200.0	
	dist. to pivot	m	0.15	0.15	0.15	0.15	
	Z		1	1	1	6	
	A		1	1	1	12	
add'l target 1	element		Al	Al	Al		
	thickness	mg/cm2	83	83	83		
	dist. to pivot	m	0.00	0.00	0.00		
	Z		13	13	13	0	
	A		27	27	27	0	
cryo tgt window	element		Al	Al	Al		
	thickness	mg/cm2	83	83	83		
	dist. to pivot	m	0.30	0.30	0.30		
	Z		13	13	13	0	
	A		27	27	27	0	
exit window	element		Be	Be	Be	Be	
	thickness	mg/cm2	46.94	46.94	46.94	46.94	
	dist. to pivot	m	0.4	0.4	0.4	0.4	
	Z		4	4	4	4	
	A		9	9	9	9	
critical window	radius	cm	13.8	13.8	13.8	13.8	
	dist. to pivot	m	5.10	5.10	5.10	5.10	
scattering weighting factor			0.50	0.50	0.50	0.50	
time	run time (100% eff.)	hours	48	264	720	48	1080
		days	2.0	11.0	30.0	2.0	45.0
	installation time	hours					0
		days	0.0	0.0	0.0	0.0	0.0
dose rate at the fence post (run time)	method 1	urem/hr	2.67	2.79	2.87	0.19	
	method 2	urem/hr					
	conservative	urem/hr	2.67	2.79	2.87	0.19	
dose per setup		urem	128	736	2067	9	2940
% of annual dose budget		%	1.3	7.4	20.7	0.1	29.4

% of allowed dose for the total time

238.5

% of allowed dose for the run time only

238.5

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

date form issued:

March 27, 2023

author: P. Degtiarenko