

RADIATION PHYSICS NOTE

Skate Calibration

On July 23, 1974, Bob Rodriguez performed the following measurements of the skate system.

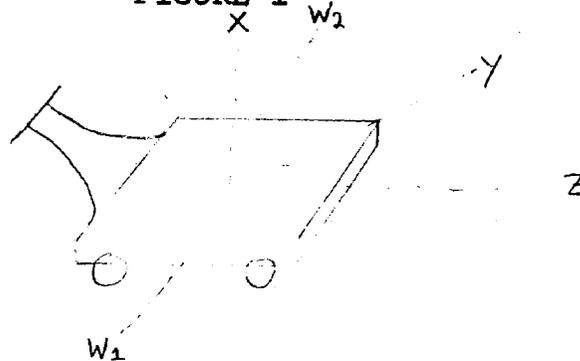
I. Reaction to Outside Background levels:

The three different Cesium sources shown in Table 1 were each used in the five (5) different spatial orientations shown in Figure 1.

TABLE 1

mR/hr	Source	Distance
.1 mR/hr	137-2.2-1	88.0 cm
1.0 mR/hr	137-3.1-1	61.0 cm
10 mR/hr	137-4.3-2	85.0 cm

FIGURE 1



The gamma from these sources has an energy of .66 MeV and this is close to the average gamma from activated Fe (1 MeV). The results are shown in Table 2.

TABLE 2

	July 23, 1974		
	Rateometer Reading .1 mR/hr	1 mR/hr	10 mR/hr
X	400 x 1	200 x 10	200 x 100
Y	450 x 1	225 x 10	200 x 100
Z	100 x 10	580 x 10	550 x 100
W ₁	750 x 1	400 x 10	360 x 100
W ₂	600 x 1	200 x 10	225 x 100

NOTE: Background at 32 Winnebago ~ 350 c/m!

II. Reaction to Contamination as a Function of Position:

A 2.2 nCi swipe (880 cpm on the sample changer) was placed on the floor and the skate was run over it in the five different ways shown in Figure 2 at three differing heights above the floor. The results are given in Table 3.

FIGURE 2

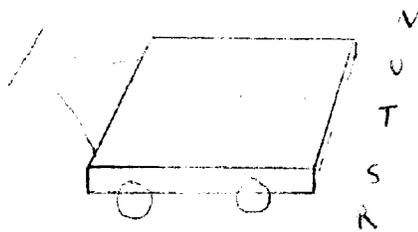


TABLE 3

Second Lowest Notch		Middle Notch	
R	250 c/m	R	200 c/m
S	450 c/m	S	400 c/m
T	550 c/m	T	475 c/m
U	500 c/m	U	450 c/m
V	200 c/m	V	200 c/m

TABLE 3

High Notch

R	250 c/m
S	275 c/m
T	300 c/m
U	250 c/m
V	200 c/m

NOTE: Background was about 200 to 250 c/m.

CM/neh