

RESPONSE FOR PANCAKE TUBE SURVEY METER
扁平管巡测仪响应

Response data for the 2" T-1190 GM Pancake Tube instruments follow:

The graph represents data gathered from eighteen different calibrations on different instruments. Five instruments were calibrated two times each. The rest were calibrated one time. Three curves are present in the graph, the highest, lowest, and average responses.

2 英寸 T-1190GM 扁平管仪器响应数据如下:

曲线图表示从不同仪器经过 18 次标定收集的数据，其中 5 台仪器各标定 2 次，其余的标定各 1 次，曲线图中三段曲线表示最高、最低和平均响应。

Calibration conditions, limitations, and assumptions (caveats) are listed below:

标定条件、限制、假定（注意事项）如下:

1. Backscatter from aluminum backing of sources is not accounted for.
源铝背衬反向散射不考虑在内
2. The apparent activity is derived from the actual activity of the sources by accounting for the attenuation of 0.9 mg/cm² aluminized mylar covering over the source material by using the following correction factors.

表观活度由辐射源实际活度计算得出，将 0.9mg/cm² 辐射源铝外衬射线阻挡考虑在内使用以下更正因子计算

ISOTOPE	AVERAGE BETA KEV	TRANSMISSION FACTOR
C-14	49.5	0.80
Pm-147	62	0.88
Tc-99	84.6	0.92
Cl-36	251.3	0.97
Sr-90/&-90	565.3*	0.99

* Arithmetical average of the average energy of Sr-90 and Y-90.

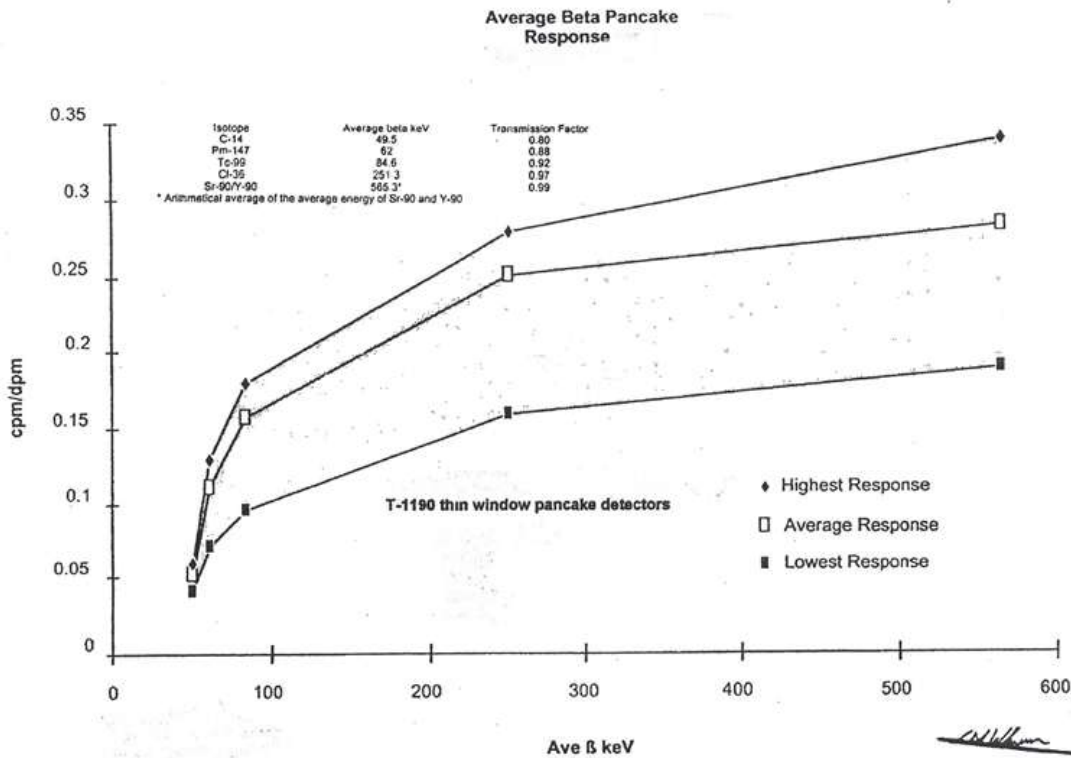
Sr-90 和 Y-90 平均能量的平均数

3. Average energy reduction not accounted for by mylar covering.
平均能量减少不考虑迈拉屏
4. Point source is centered on the tube face and is nominally 0.5 cm from grid covering the GM tube.
点源放在扁平管中心一般离保护 GM 管的格栅 0.5 米
5. Sources are New England Nuclear NES-269 Multimount Sources.
辐射源为 New England Nuclear NES-269 多种安装源



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SENSITIVITY OF 2" T-1190 GM PANCAKE TUBE FOR GAMMAS OF I-125
2" I-125 伽马 T-1190 GM 扁平管灵敏度

1. By measurement using I-129 surrogate.

通过使用 I-129 代替物测量

130 cpm net from 0.05 μCi -I-125 @ 30% geometry.

2. By chart p16 Radiation health Handbook US HEW:PHS 1957 as amended.

根据 1957 修订美国 NEW 辐射健康手册 16 页表格

3×10^6 photons / $\text{cm}^2/\text{s}/\text{r}/\text{hr}$ for 30 KeV Gammas.

3. $\frac{15.5 \times 10^6}{1000}$

= 4.6×10^4 photons strike detector window normal to
1mR/hr flux for I-125.

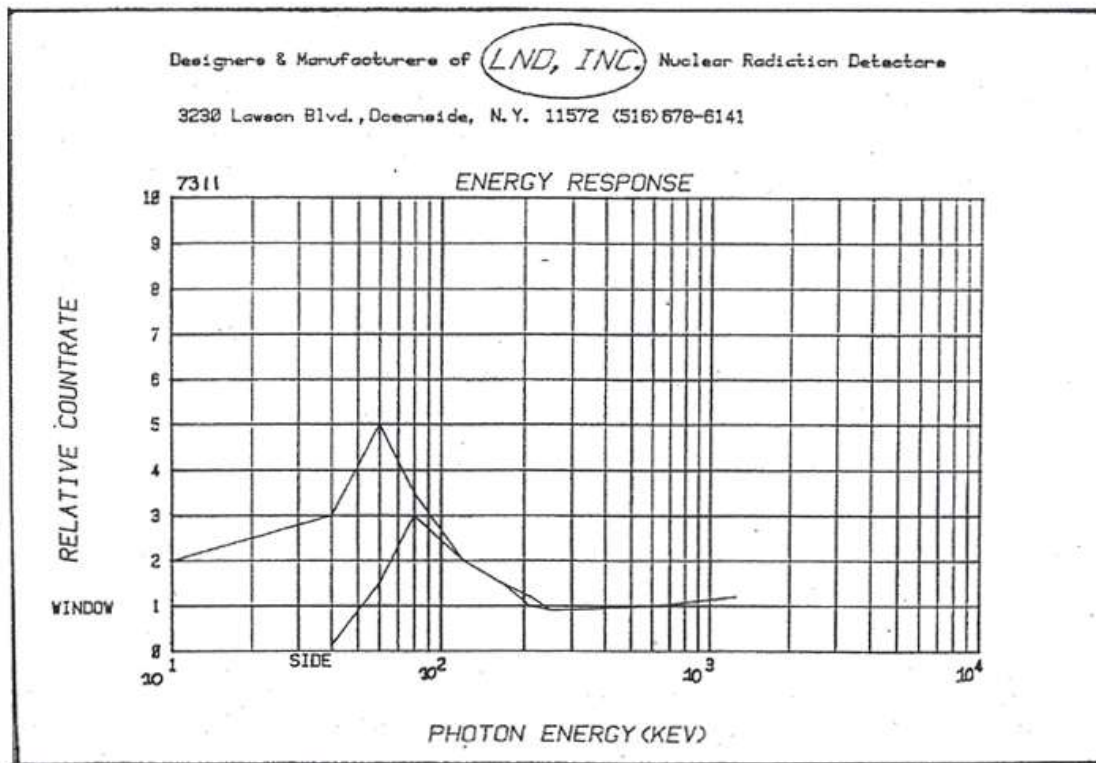
4. $4.6 \times 10^4 \times 0.03 \times 60 = 8400$ cpm/mR/hr for I-125.

**TECHNICAL ASSOCIATES INSTRUMENTS USING THE
2" T-1190 GM PANCAKE TUBE**

使用 2" T-1190 GM 管的 TA 公司设备

MODEL 型号	TITLE 标题
AIR-TBM	Air Monitor Multi-Use Radiation Monitor - Alpha, Beta Gamma
TBM-3	Surface Contamination Monitor - Alpha, Beta, Gamma, X-Ray
TBM-3S	Surface Contamination Monitor - Alpha, Beta, Gamma, X-Ray
TBM-3SR	Surface Contamination Monitor - Alpha, Beta, Gamma, X-Ray
TBM-3SR-D	Digital Contamination Monitor - Alpha, Beta, Gamma, X-Ray
TBM-15	Frisker - Alpha, Beta, Gamma, X-Ray
TBM-15C	Wide Range Frisker - Alpha, Beta, Gamma, X-Ray
FM-9-AB2	Alpha, Beta, Gamma Air Monitor
FM-9-M2	Beta Particulate Air Monitor
FM-9-ABGN	Beta, Gamma Particulate Air Monitor

FM-9-XE	Xenon Air Monitor
P8-NEON	Quick Scan X-Ray Detector - Alpha, Beta, Gamma, X-Ray
HSM-10B	Hand & Shoe Monitor – Alpha, Beta, Gamma
ABF-M-5	Floor Monitor – Alpha, Beta, Gamma
MEDA-SP	Radiation Safety Water Monitor – Alpha, Beta, Gamma
P-15	Alpha, Beta, Gamma Probe
P-28	Long Arm Alpha, Beta, Gamma Probe
P28-4	Long Arm Alpha, Beta, Gamma Probe – (4) T-1190 GM Pancake Detectors



GAMMA & X-RAY