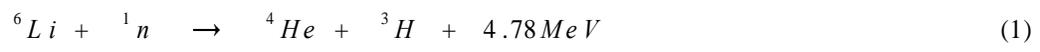




0.1mm 2m 가 ,  
 2mm cm 가 .  
 가 , bundle bundle  
 layer 가 가 가  
 가 가  
 가 -130  
 (specific gravity) 2.5  
 +120 가  
 ( 4) 가  
 NaI(Tl) 4 6%  
 1 2%  
 Li  
 1MeV ,  
 (deuteron)  
 2.1, 2.8 9.5 1  
 (triton)가 (MeV) 20 30%  
 1.2MeV [2, 3].  
 가  
 (electric pulse amplitude)  
 (pulse-height spectrum)

2.

Cerium (Ce) (activator)  
 (inorganic scintillator) NaI(Tl)  
<sup>6</sup>Li <sup>6</sup>Li  
 Li  
 (1)



4.78MeV 가 <sup>4</sup>He  
 2.05MeV 가 <sup>3</sup>He 2.73MeV  
 (range) 7 μm 40 μm

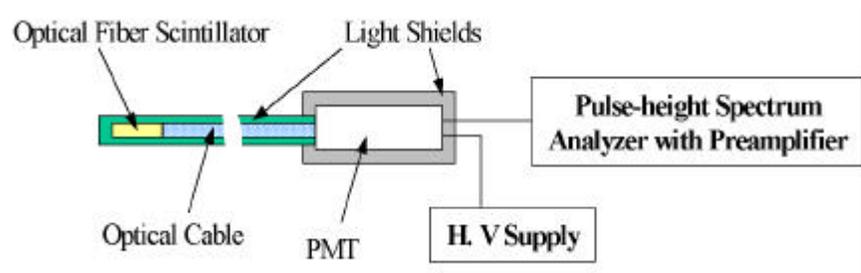
[4].  
 가  ${}^3\text{He}$   ${}^{10}\text{B}$   
 1/10 [2].  ${}^6\text{Li}$   
 (0.025eV) 940 barns 가 10keV 1/V (V: 가  
 ) . 120mm 가 가  
 ( 4 ) 가 [5].  
 $\text{Ce}^{3+}$  (excitation state) (ground state)  
 (de-excitation)가 가 가  
 ${}^6\text{Li}$  375 450nm [6].  
 (photo multiplier  
 thbe : PMT) (amplitude)  
 가 .  
 PMT (dark current)

3.

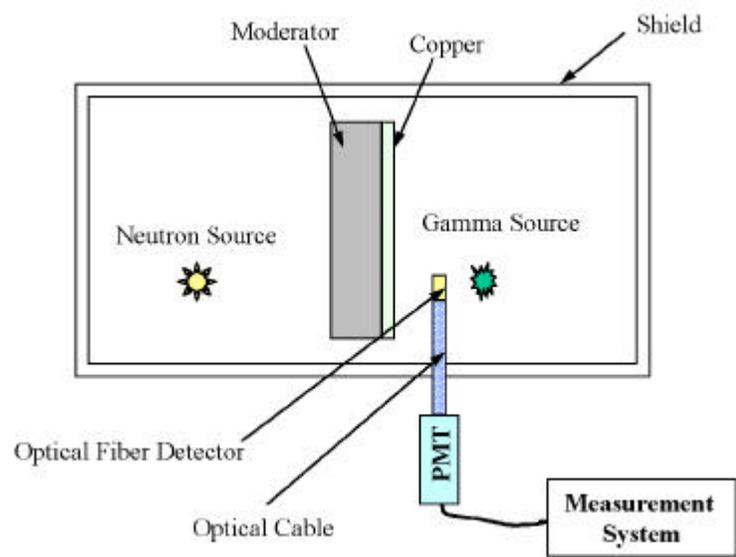
PMT  
 PMT  
 $\text{Ce}^{3+}$  330 480nm 가  
 395nm 가  
 가 [7].  
 1 , PMT  
 , PMT  
 )가 . 가  
 ${}^6\text{Li}$ 가 95%  
 Ce 0.5mm 1mm .  
 0.04mm 가  
 400nm km 70dB  
 m 95% . PMT  
 $10^6$  nA .  
 ${}^{241}\text{Am}/\text{Be}$ (30mCi)  ${}^{137}\text{Cs}$ (100  $\mu\text{Ci}$ )  
 , moderator 4cm polymer [8]  
 X- 0.15mm polymer



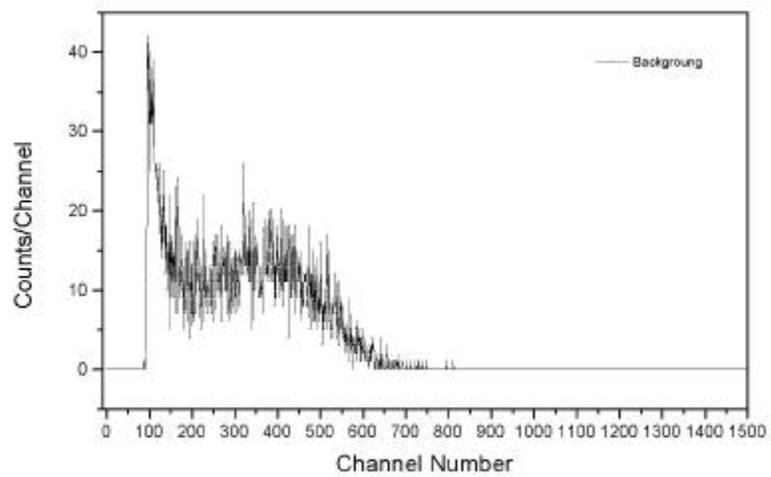




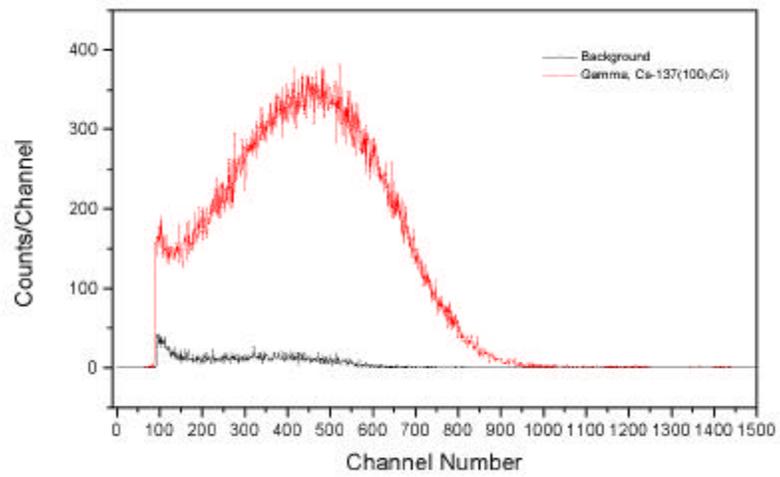
1.  ${}^6\text{Li}$



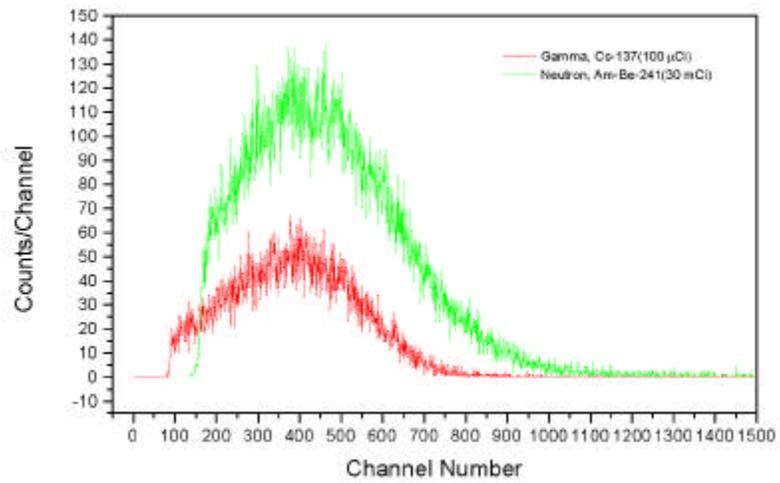
2.



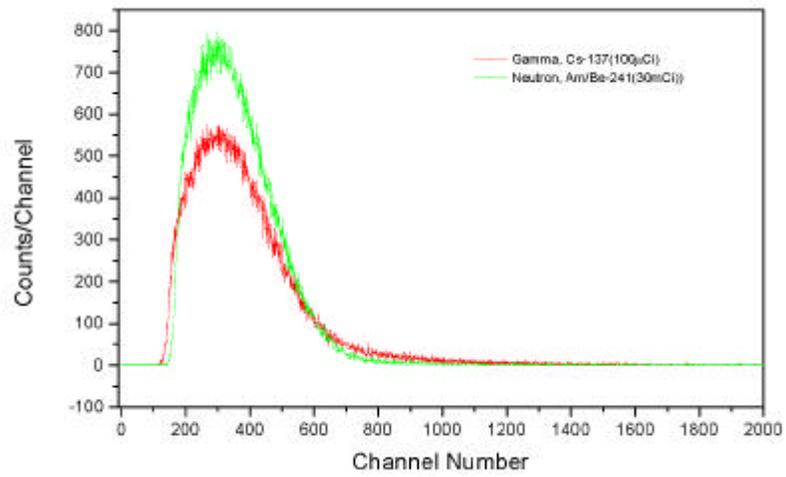
3. Background



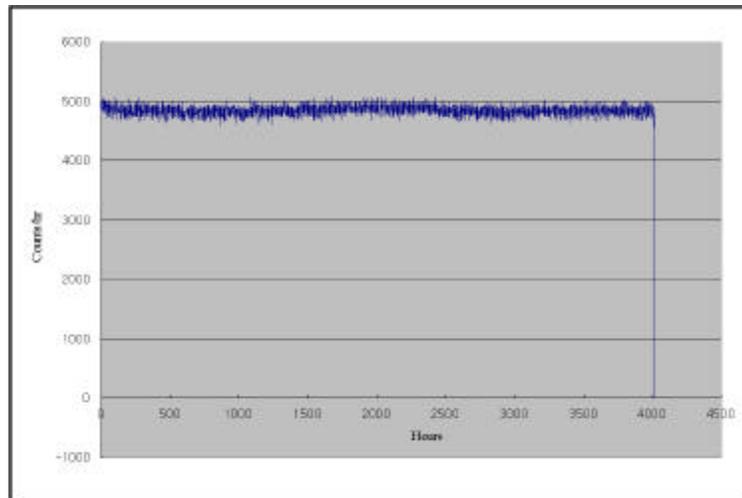
4. 0.5mm, 5cm  
Background  $^{137}\text{Cs}$



5. 0.5mm, 5cm  
( $^{137}\text{Cs}$ ) ( $^{241}\text{Am/Be}$ )



6. 1mm, 5cm  
 $(^{137}\text{Cs})$   $(^{241}\text{Am/Be})$



7.

