

## In comparison with the “Old “ Bubble Chambers there are two news :

1)It is NOW possible to reach indefinitely long stability in moderately superheated Bubble chamber J.Bolte NIM A577,569 (2007)

2)Different degree of the superheated state correspond to different sensitivity for different particles.

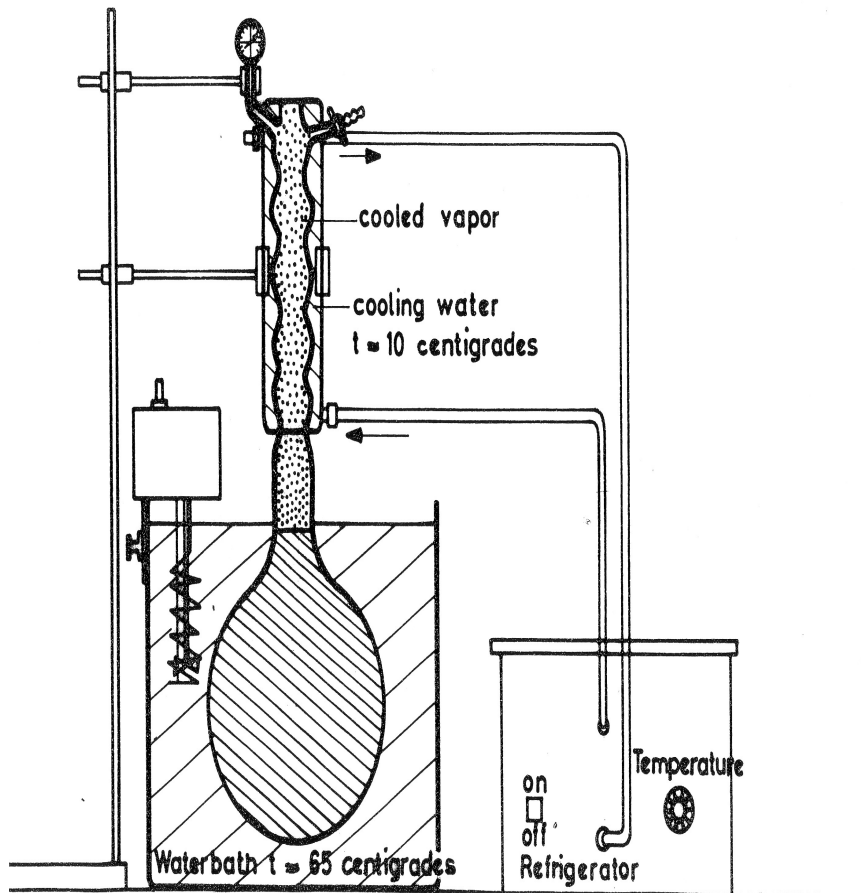
These considerations bring to 3 different techniques for DARK MATTER SEARCH:

I)Bubble Chambers Continuosly Sensitive  
(See COUPP)

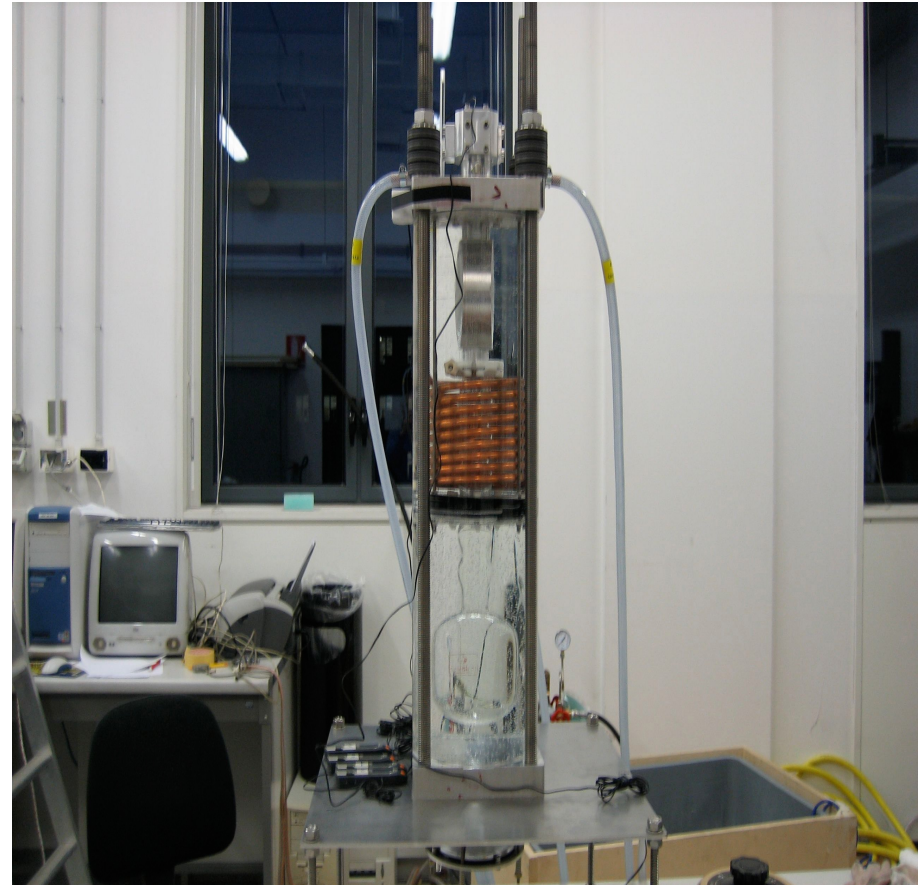
II)S.D.D. (**S**uperheated **D**roplet **D**etectors)  
(PICASSO)

III)The “**GEYSER**” detector.(Milano-Bicocca and PICASSO+)

## PRIMO TENTATIVO (2009)



Old Geyser (Berne)  
(1973)

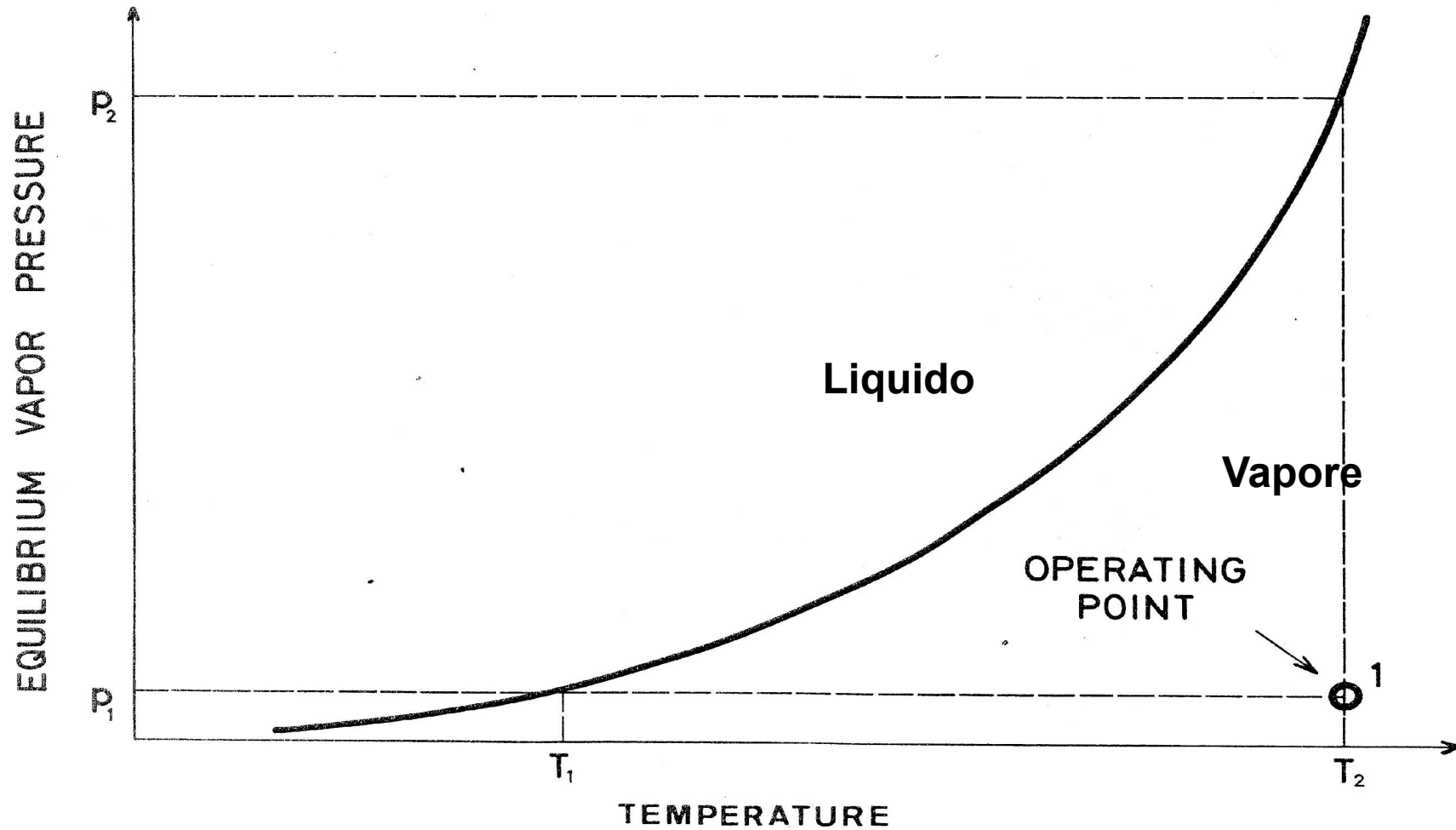


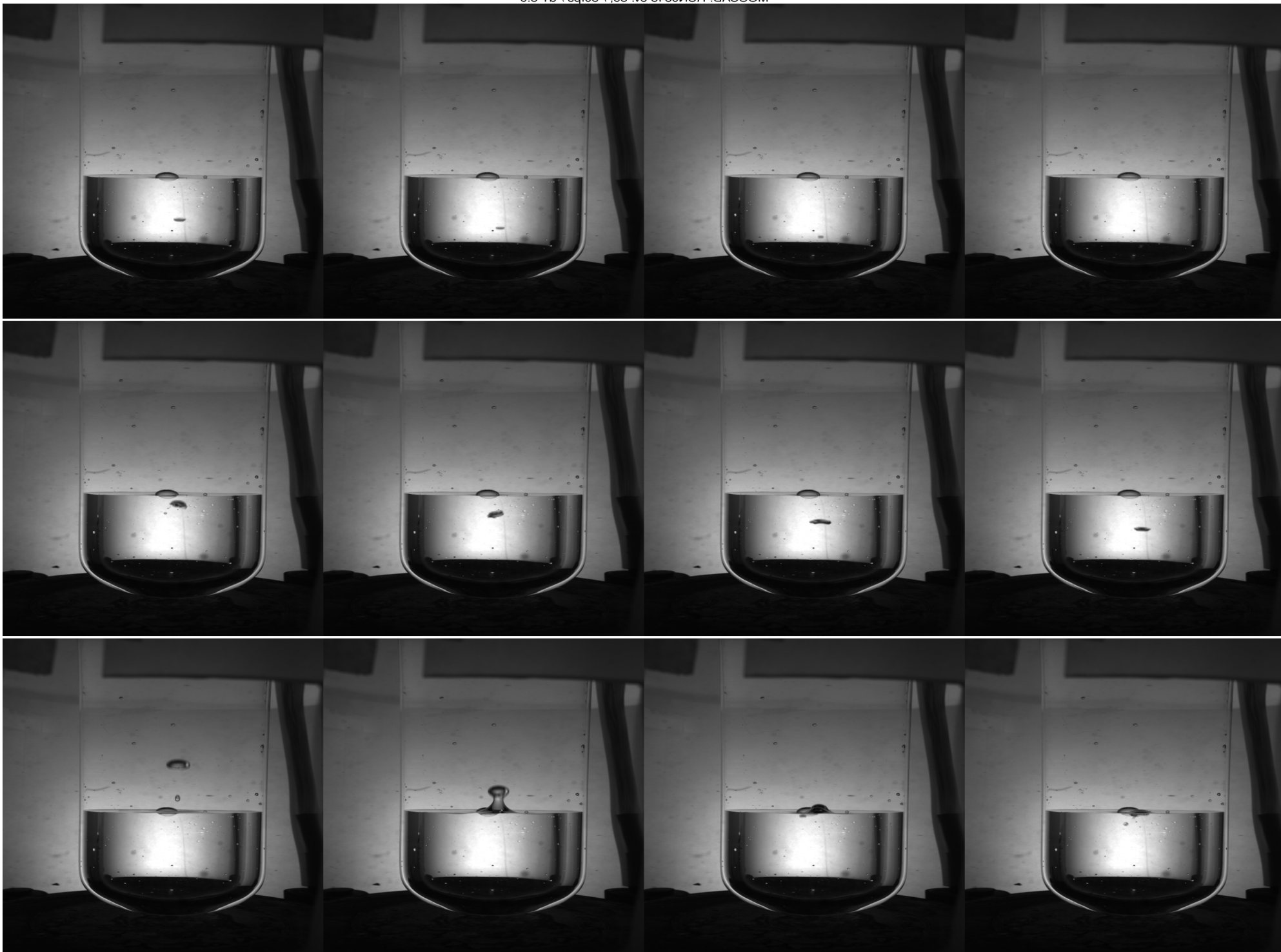
Geyser in Milano-Bicocca  
(2009)

T1=10 C

T2=65 C

*Ideal cycle of a Geyser*

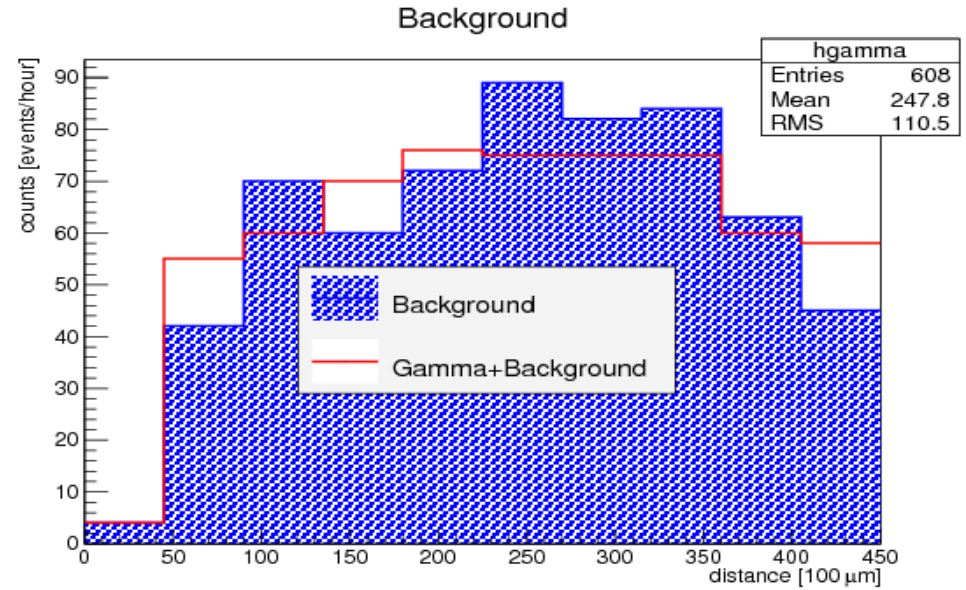
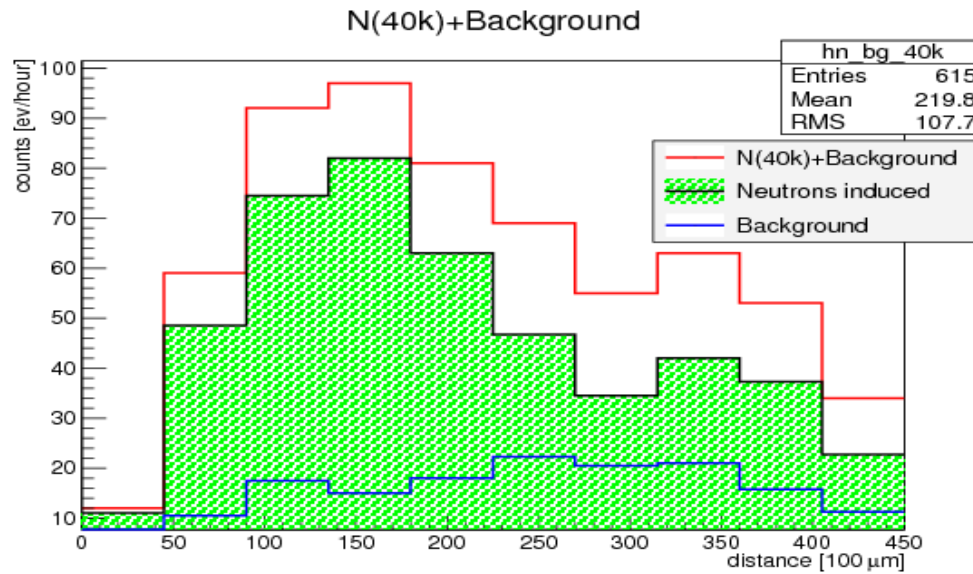




# INVESTIGATION OF THE GEYSER in MILANO-BICOCCA

1) Use of A NEUTRON SOURCE (Am-Be 40 kBq)

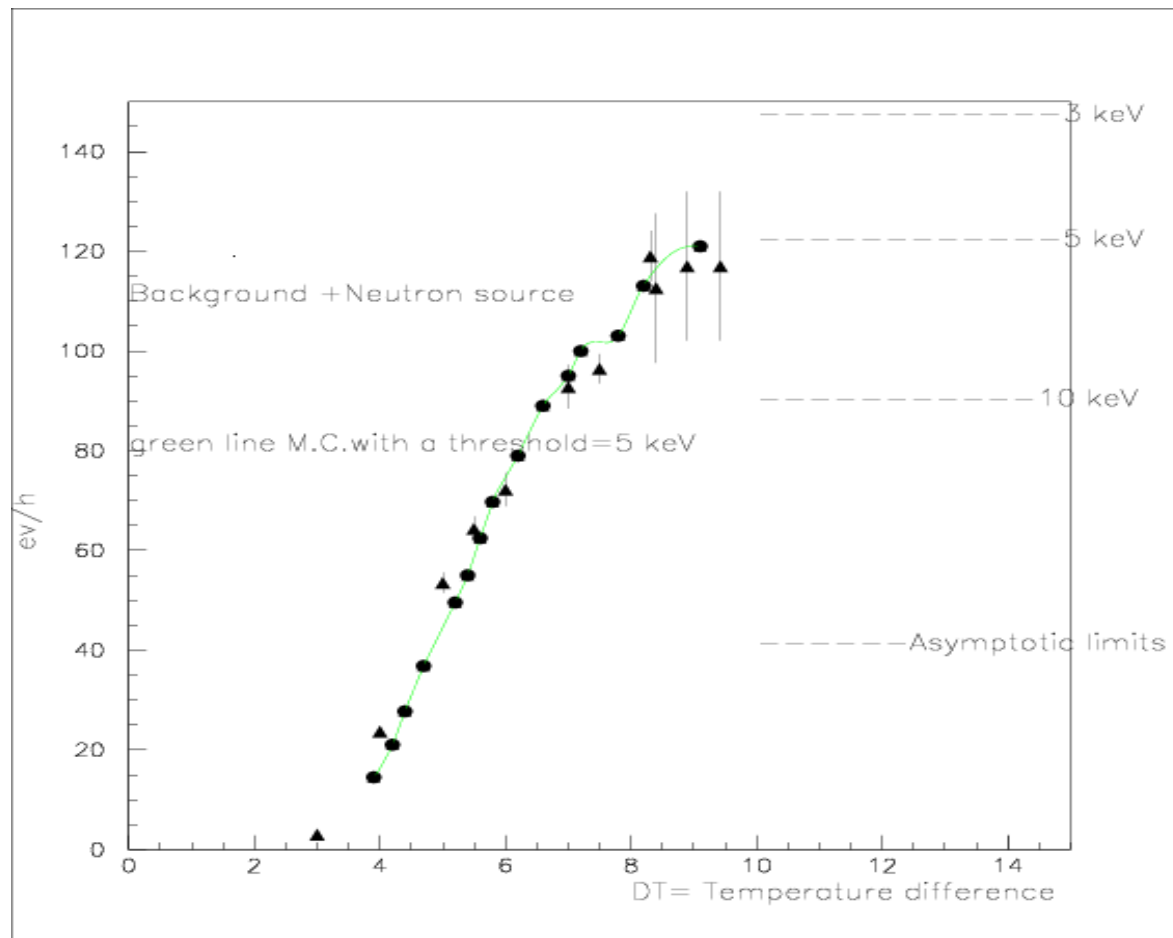
2) Use of a GAMMA SOURCE ( $^{22}\text{Na}$ )



Very high efficiency for neutrons(WIMP)

Insensitiveness for gamma and electrons!

## Low threshold ( about 5 keV)-Very useful for Dark Matter





Vaso da 27 L : ora O.K.

We have constructed a big detector (40 kg) that we will put in the Gran Sasso Laboratory; we have preliminary estimate of Background and an expectation for the sensitivity on the SD (proton) cross section very attractive.

