Visualisation of radioactive particles / Diffusion cloud chamber 5.2.04-00

What you can learn about ...

- ➔ α, β, γ-particles
- ➔ β deflection
- ➔ Ionising particles
- ➔ Mesons
- ➔ Cosmic radiation
- ➔ Radioactive decay
- ➔ Decay series
- ➔ Particle velocity
- ➔ Lorentz force

Principle:

Radioactivity is a subject in our society which has been playing an important role throughout politics, economy and media for many years now. The fact that this radiation cannot be seen or felt by the human being and that the effects of this radiation are still not fully explored yet, causes emotions like no other scientific subject before.

The high-performance diffusion cloud chamber serves for making the tracks of cosmic and terrestrial radiation visible so that a wide range of natural radiation types can be identified. Furthermore, the diffusion cloud chamber offers the opportunity to carry out physical experiments with the aid of artificial radiation sources.

What you need:

Diffusion cloud chamber PJ45, 230 V	09046.93	1
Isopropyl alcohol, 1000 ml	30092.70	2
Thorium-source	09043.41	1
Radioactive source, Sr-90, 74kBq	09047.53	1
Support base -PASS-	02005.55	1
Swinging arm	08256.00	1
Support rod, stainless steel 18/8, l = 250 mm, d = 10 mm	02031.00	1
Right angle clamp -PASS-	02040.55	1
Object holder 50 mm x 50 mm	08041.00	1
Holder for dynamometer	03068.04	1
Scale for demonstration board	02153.00	1
Accessory set for Beta deflection	09043.52	1
Stand tube	02060.00	1

Complete Equipment Set, Manual on CD-ROM included
Visualisation of radioactive particles / Diffusion cloud chamber P2520400

Experimental set-up: deflection of β-particles.

Tasks:

1. Determination of the amount of background radiation
2. Visualisation of α, β, γ-particles and mesons
3. Visualisation of the Thorium (Radon) decay
4. Deflection of β^--particles in a magnetic field