

F A S T T A R G E T

Extending the existing target operation, a "fast target" was constructed. Its main part is a finger (Fig. 1) which is crossing the beam within a very short time, giving a secondary beam of low intensity and short length. It has been used already for the bubble chamber run on 8th and 9th August and allowed a second burst (~ 20 ms later) for counter experiments.

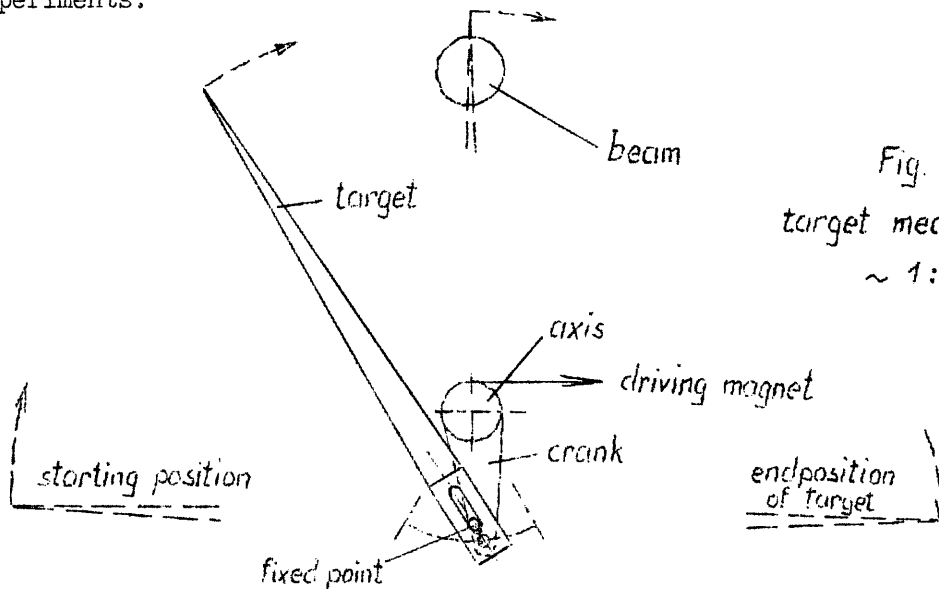


Fig. 1
target mechanism
 $\sim 1:1$

Here some values which are possible for users :

Intensity of secondary beam :

0,3 ... 5 o/o of primary beam, within a ratio of $\sim 1 : 5$; this can be modified by changing the radial position of the target (Fig. 2)

Burst length :

250 ... 700 μ s

Target beam transversing velocity :

12 ... 35 m/s

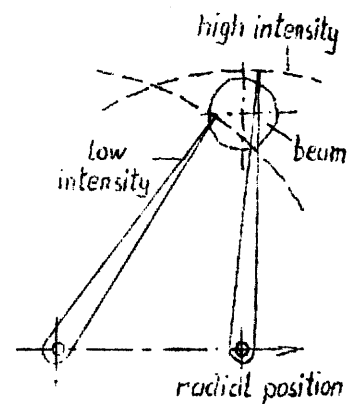


Fig. 2

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Jitter of trigger-to-burst-delay :

less than $\pm 120 \mu\text{s}$ (90 o/o probability)
less than $\pm 300 \mu\text{s}$ (99.9 o/o probability)

Target material :

up to now, only BzBe was tried,
but it is possible to use other materials as well, provided the
material strength is high enough

Target shape :

thickness 0,1 ... 0,2 mm. } target top which is
face width 0,1 ... 2 mm. } traversing the beam

It is slightly curved in beam direction to increase the stiffness.

If you want something else, there are the following limits :

- 1) an increasing of the mass of the target to more than mentioned above will increase the burst length;
- 2) the accelerating and deaccelerating forces limit a change of the shape.

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Distribution : (open)

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PS/1820