

## RF ION SOURCE WITH A 100 Mc/s OSCILLATOR

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The output current and gas consumption of the ion source now in use on 1.5 MeV Cockroft-Walton accelerator at Boris Kidrič Institute were not in accordance with requirements which were imposed in the study of triton-induced reactions on the light nuclei. For these reasons, it was necessary to design a new type of ion source and a 100 Mc/s grounded grid oscillator. The oscillator uses a single triode TB 2.5/300 and has an r.f. output power about 300 watts with a total power input of 500 watts. The characteristics of the ion source under typical operating conditions with hydrogen, and when set at maximum current, are as follows:

output current: 96%  $H_1^+$ , 3%  $H_2^+$  and 1%  $H_3^+$

gas consumption:  $1.5 \text{ cm}^3/\text{h}$

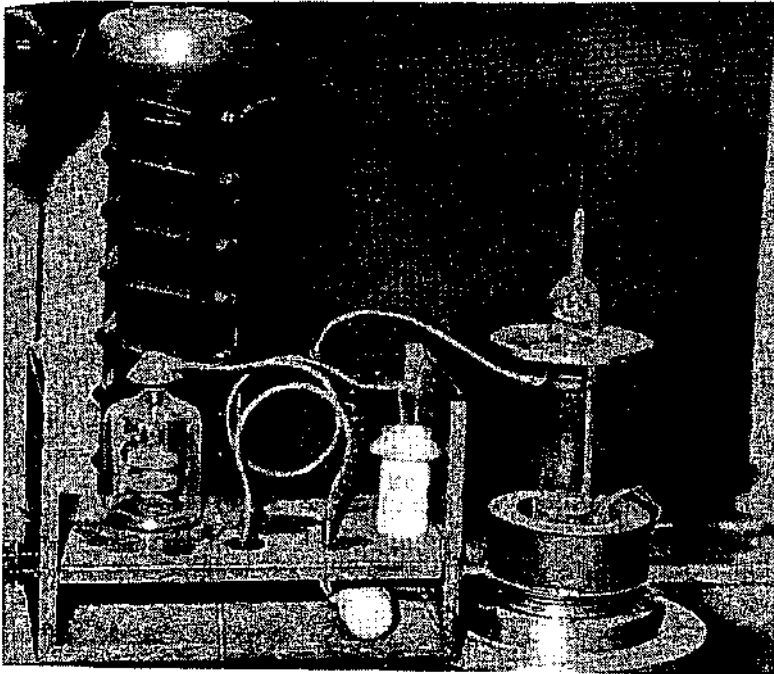


Fig. 1