# HEAD-SCATTER MEASUREMENT

Measure head-scatter factors down to a 3 cm x 3 cm field size simply and easily without side scatter from a water tank



# MINIPHANTOM & IN-AIR COMPARISON JIG

#### VERSATILE AND EASY TO USE

The detection system is comprised of an ion chamber and the columnar MiniPhantom. The MiniPhantom is a  $d_{max}$  columnar build-up cap which is 3 cm in diameter and 20 cm in length.<sup>1,2</sup> Scribed lines on the MiniPhantom facilitate alignment of the ion chamber's collecting volume at 10 cm from the end of the phantom. The stand also allows the MiniPhantom to be positioned horizontally for measuring beams.

<sup>1</sup> P.A. Jursinic and B.R. Thomadsen, "Measurement of head-scatter factors with cylindrical build-up caps and columnar miniphantoms," **Med. Phys.** 26(4), April 1999.

<sup>2</sup> T.Z Zhu and B.E. Bjarngard, "Head scatter off-axis for megavoltage x-rays," **Med. Phys.** 30(4), April 2003.

<sup>3</sup> Individual components may be purchased separately.

<sup>4</sup> MiniPhantom available for other Farmer-type ion chambers.

#### ACCOUNT FOR STRAY RADIATION

Head-scatter, the stray radiation inside the head of a linear accelerator, occurs with each machine, some of which hits the patient. This radiation must be taken into account when determining the total radiation dose given.

The Standard Imaging MiniPhantom allows the measurement of head-scatter factors with standard Farmer-type ion chambers. The phantom stand is small thereby minimizing scatter. The stand can also be used as an in-air comparison jig, allowing two ion chambers to be positioned side-by-side in a highly reproducible manner.

#### MiniPhantom SPECIFICATIONS

MiniPhantom Detection System <sup>3</sup>, REF 72195 is comprised of:

- MiniPhantom for Exradin<sup>®</sup> A12 Farmer Type Ion Chamber <sup>4</sup>, REF 72194
- MiniPhantom Stand/In-Air Comparison Jig, REF 72193

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## MINIPHANTOM & IN-AIR COMPARISON JIG REF 72193

### ADVANCING RADIATION $\mathbf{Q}\mathbf{A}^{\scriptscriptstyle{\mathsf{M}}}$

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