Supplementary Material

In this supplementary material document, the data, in form of PDDs and profiles, are reported. In the first part, from Figure 1S to Figure 5S, the measured data are presented, acquired using different detectors or different setup conditions (the missing lateral scatter, MLS, with only 7 cm of phantom on one side of the beam central axis).

In the second part, from Figure 6S to Figure 11S, the same PDDs and profiles are shown for the different configurations, as explained in the main text, together with the measured reference data, i.e. the Semiflex-3D data, that was assumed to better reflect the actual beam.

**Figure 1S** - PDDs: 6X measured, 3x3 and 40x40 cm$^2$ with different detectors, and in conditions of missing lateral scatter MLS, with the Semiflex3D. The first plot is normalized to $d_{max}$, the second at 10 cm depth ("clinical" conditions).
Figure 2S - PDDs: 6FFF measured, 3x3 and 40x40 cm² with different detectors, and in conditions of missing lateral scatter MLS, with the Semiflex3D. The first plot is normalized to $d_{\text{max}}$, the second at 10 cm depth (“clinical” conditions).
Figure 3S - Profiles: 6X measured, 10x10 and 40x40 cm² with different detectors, and in conditions of missing lateral scatter MLS with the Semiflex3D. First plot: dₘₐₓ; second plot: 10 cm depth; third plot: 30 cm depth.
Figure 45 - Profiles: 6FFF measured, 10x10 and 40x40 cm² with different detectors, and in conditions of missing lateral scatter MLS with the Semiflex3D. First plot: $d_{max}$, second plot: 10 cm depth; third plot: 30 cm depth.
Figure 5S - Profiles: 6X measured diagonal profiles with the Semiflex3D, at SSD=90 cm and at SSD=70 cm geometrically rescaled to SSD=90 cm. First plot: $d_{\text{max}}$; second plot: 10 cm depth; third plot: 30 cm depth.
**Figure 6S** - PDDs: 6X, 3x3 cm² calculated by Acuros in the different configurations. “Measurements” refers to the reference Semiflex3D measured data for comparison. The first plot is normalized to $d_{\text{max}}$, the second at 10 cm depth (“clinical” conditions). For the configurations in missing lateral scatter conditions, only the MLS is here reported (no ProfMLS, DiagMLS, PddMLS) for sake of simplicity, here and in the following Figures.
Figure 75 - PDDs: 6X, 40x40 cm² calculated by Acuros in the different configurations. "Measurements" refers to the reference Semiflex3D measured data for comparison. The first plot is normalized to $d_{max}$, the second at 10 cm depth ("clinical" conditions).
Figure 8S - PDDs: 6FFF, 3x3 cm² calculated by Acuros in the different configurations. “Measurements” refers to the reference Semiflex3D measured data for comparison. The first plot is normalized to $d_{\text{max}}$, the second at 10 cm depth (“clinical” conditions).
Figure 9S - PDDs: 6FFF, 40x40 cm² calculated by Acuros in the different configurations. “Measurements” refers to the reference Semiflex3D measured data for comparison. The first plot is normalized to $d_{\text{max}}$, the second at 10 cm depth (“clinical” conditions).
**Figure 105** - Profiles: 6X, 10x10 and 40x40 cm² calculated by Acuros in the different configurations. “Measurements” refers to the reference Semiflex3D measured data for comparison. First plot: \(d_{\text{max}}\); second plot: 10 cm depth; third plot: 30 cm depth.
Figure 115 - Profiles: 6X, 10x10 and 40x40 cm² calculated by Acuros in the different configurations. “Measurements” refers to the reference Semiflex3D measured data for comparison. First plot: \( d_{\text{max}} \); second plot: 10 cm depth; third plot: 30 cm depth.