

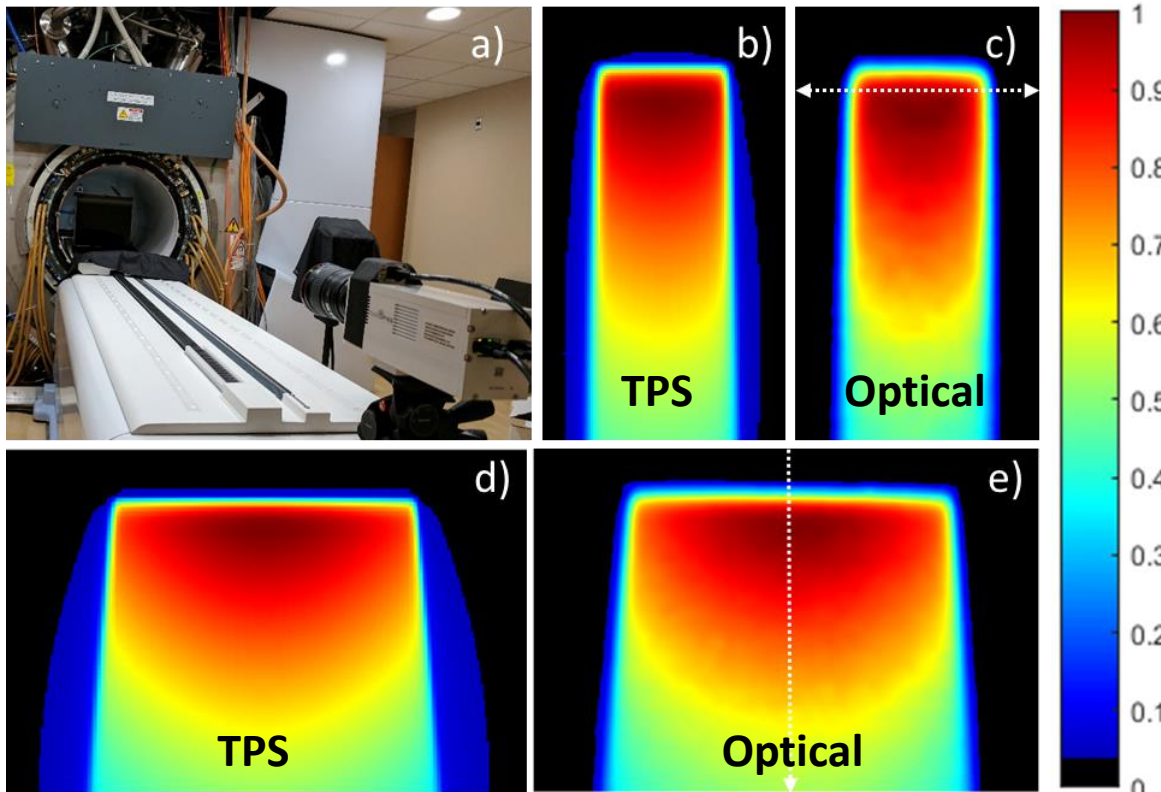
# Abstract Title: Accuracy of Real-Time Large and Small Beam Measurements From An MR-Linac Using Cherenkov Imaging Technique in a Water Tank

Date and Time: 08/01/2018 | 10:15AM — 12:15PM  
 Session Title: New QA and Dosimetry Techniques  
 Presenting Author: Jacqueline Andreozzi  
 Abstract ID: 40193

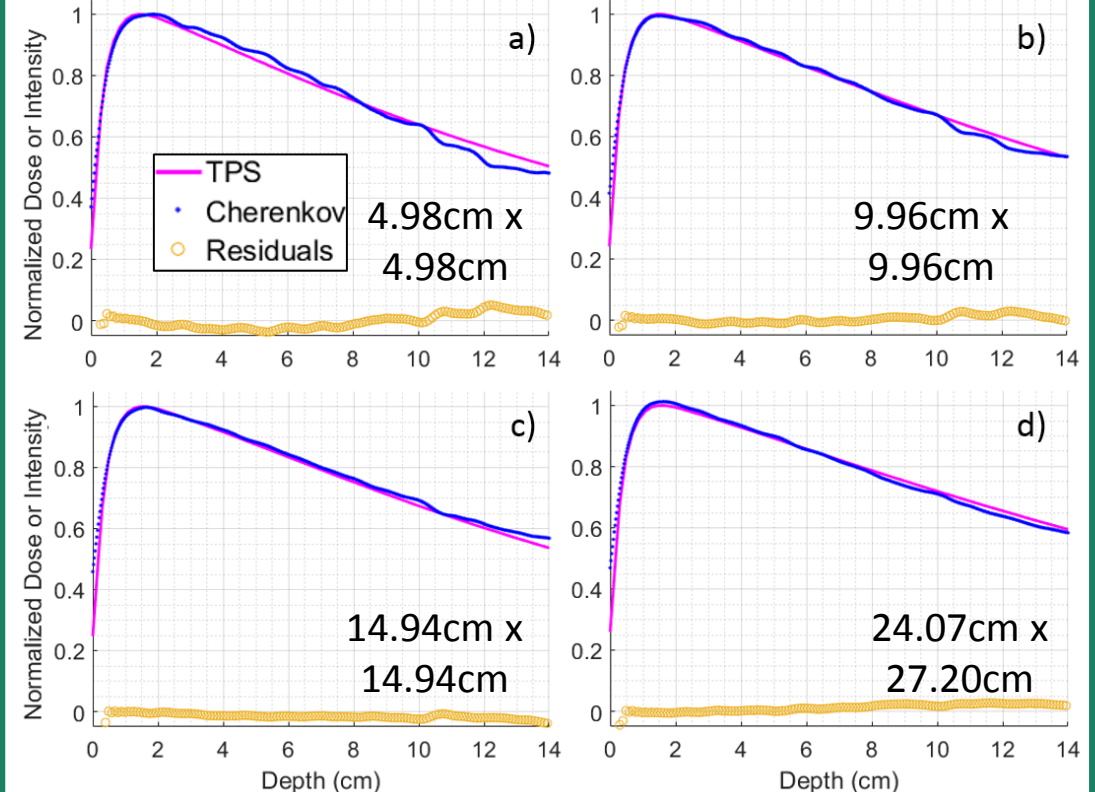
A red light-sensitive intensified CMOS camera system can rapidly perform regular QA tests on MR-linacs by imaging Cherenkov-excited fluorescence in water tanks. This talk explores the benefits and limitations of the approach.

Large Beam Cherenkov Images in Water

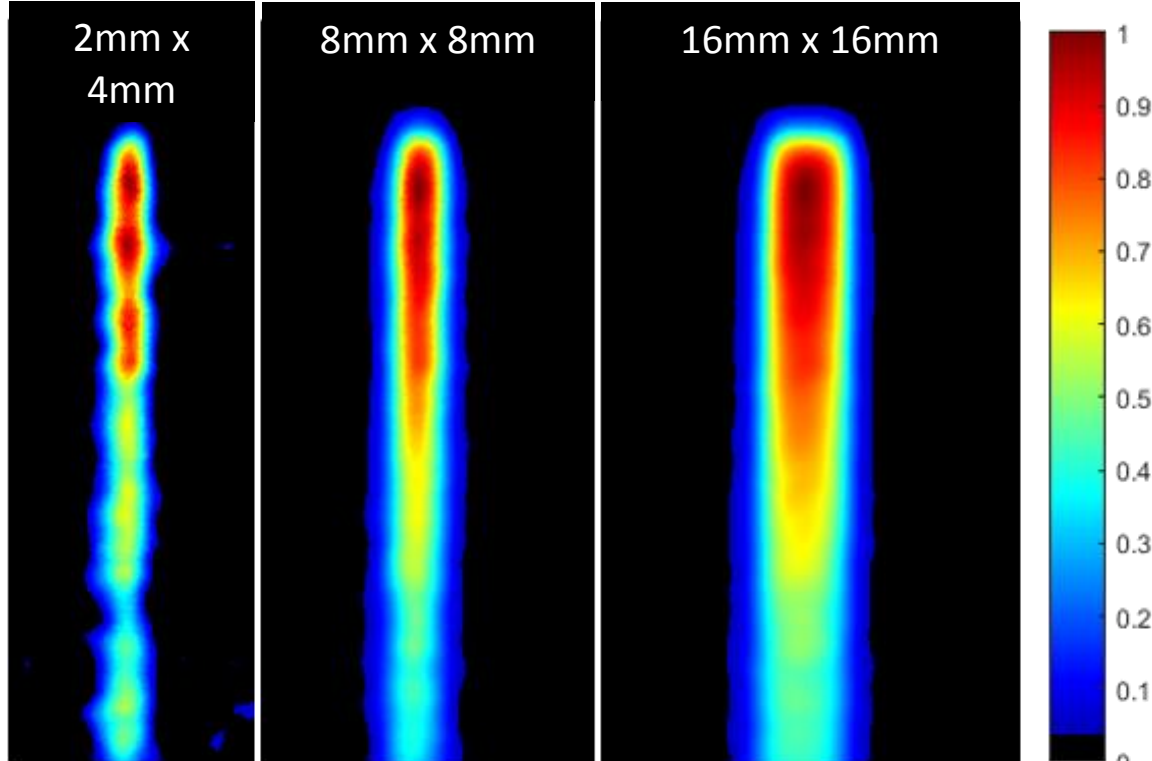
## Optical vs TPS Dose Images



## Optical vs TPS Percent Depth Dose Curves



Small Beam Cherenkov Images in Water



Noise is more pronounced in images of small beams, where shallower beam widths are integrated along the optical axis, leading to lower overall intensities before normalization. Methods to overcome these limitations are proposed.

