

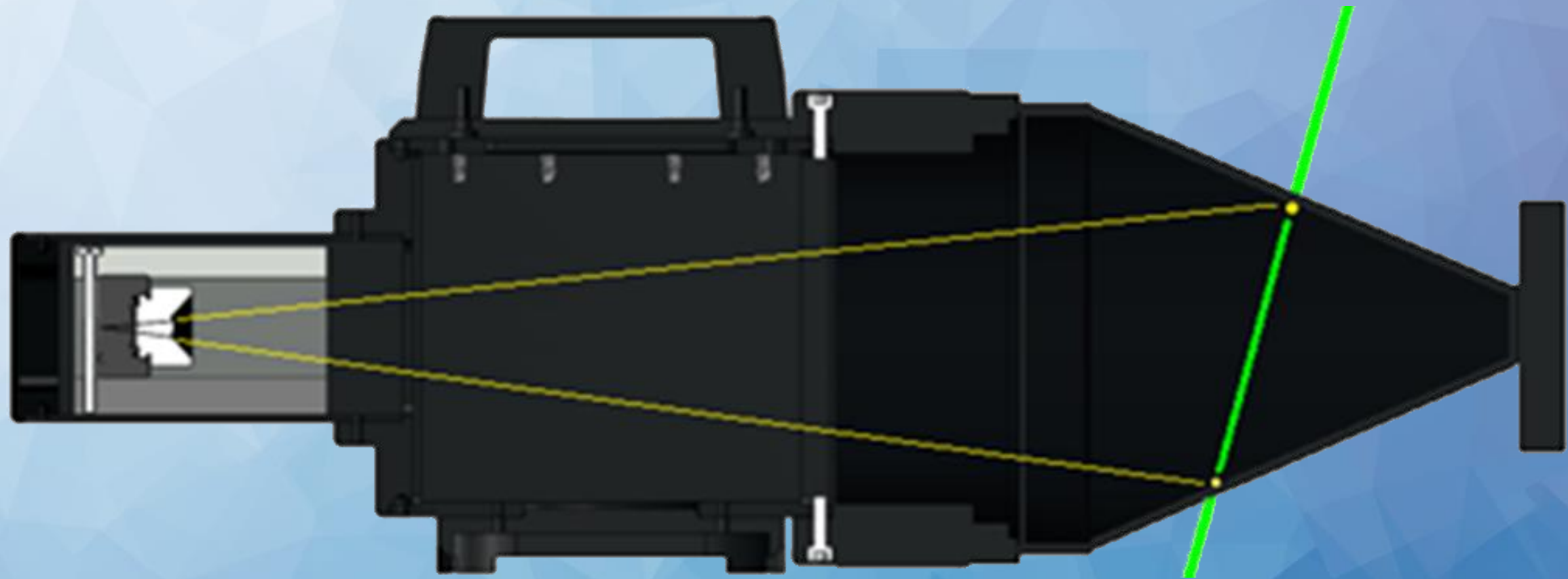
**XRV-124**

**Proton and X-Ray  
Quality Assurance**

# XRV-124 3D Phantom



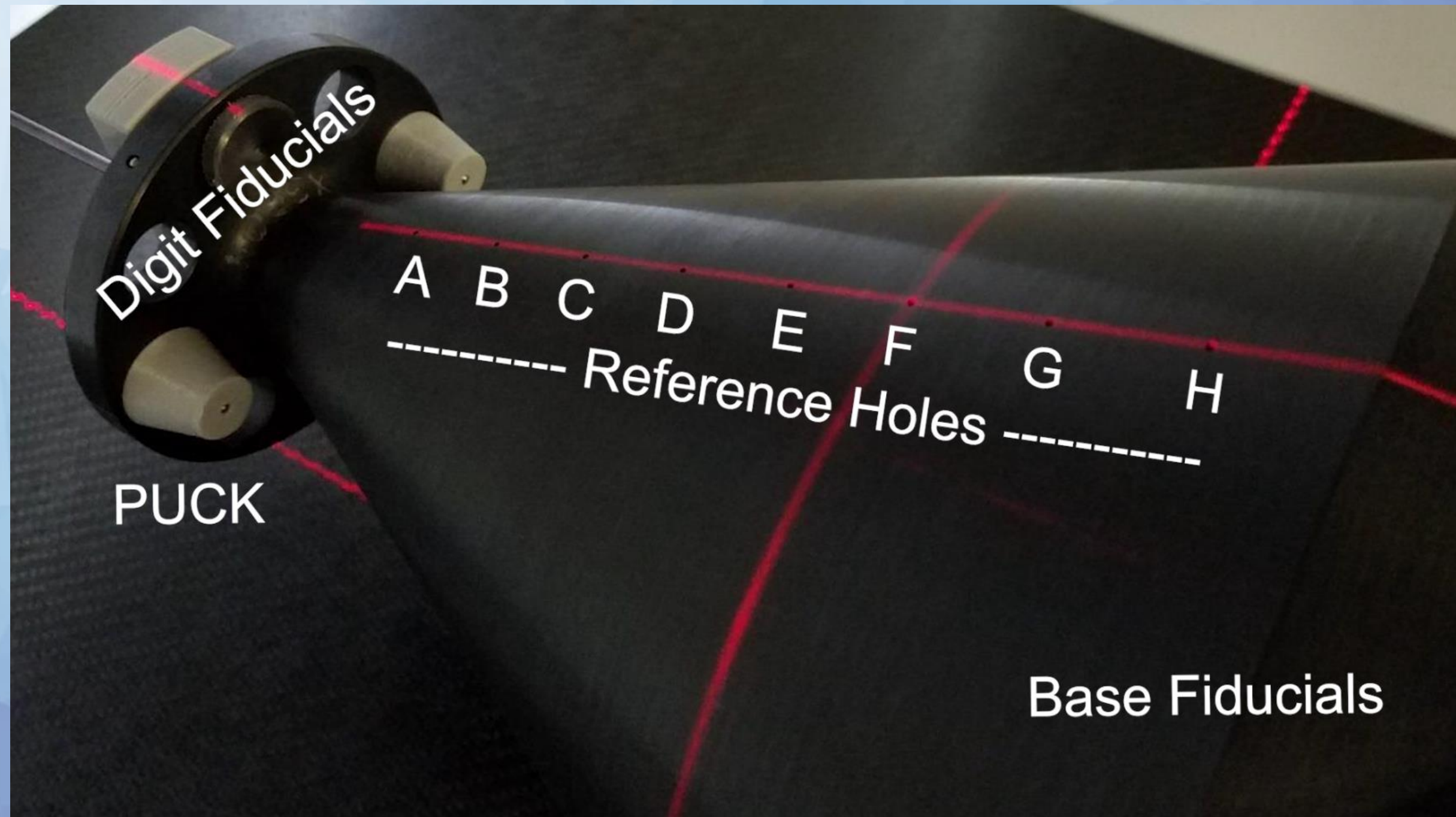
Rotationally symmetric scintillating cone  
allows beam capture at any gantry angle  
without moving the phantom

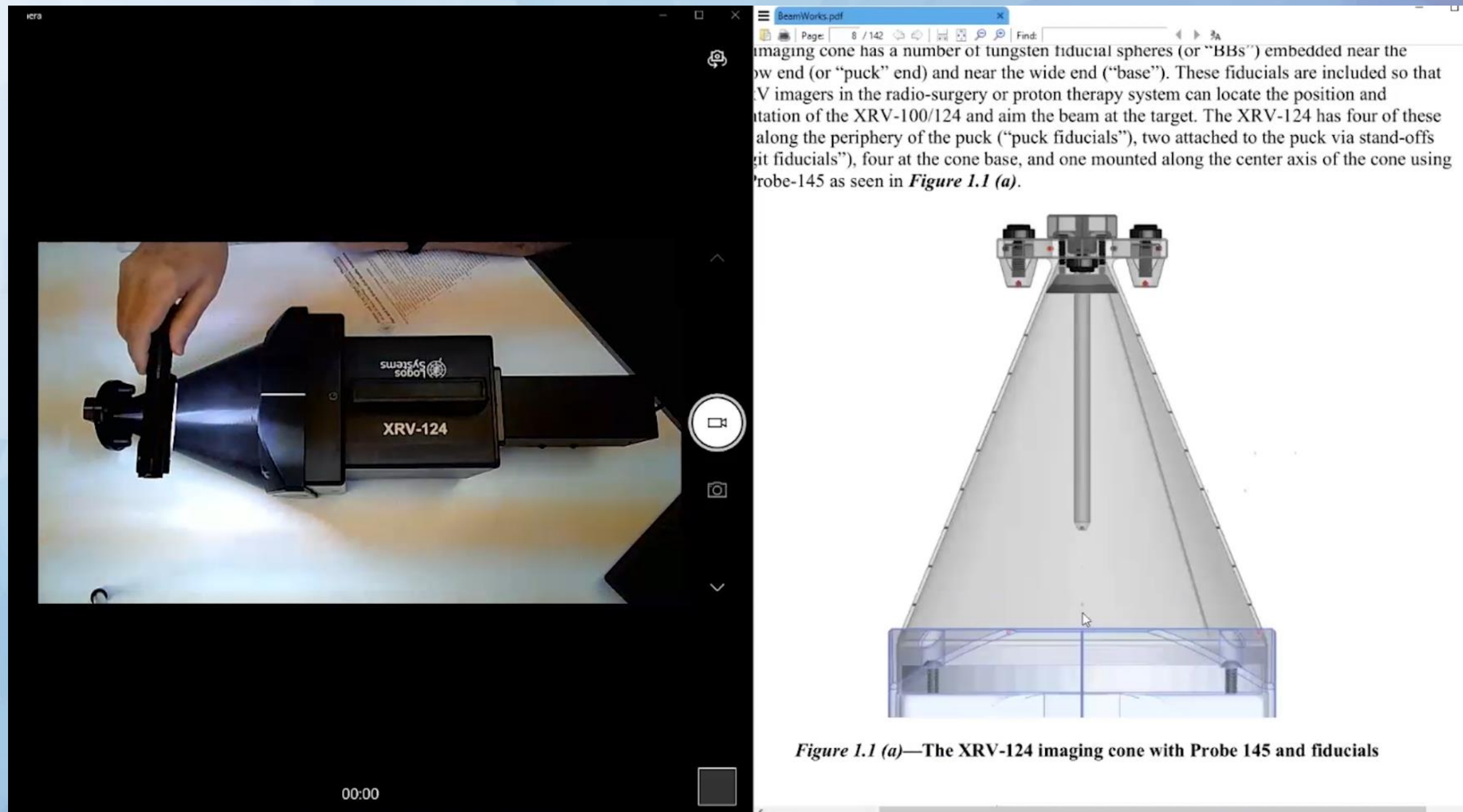


The beam passes through the scintillating cone, producing an entry and an exit spot to measure beam position, vector, profile, and timing



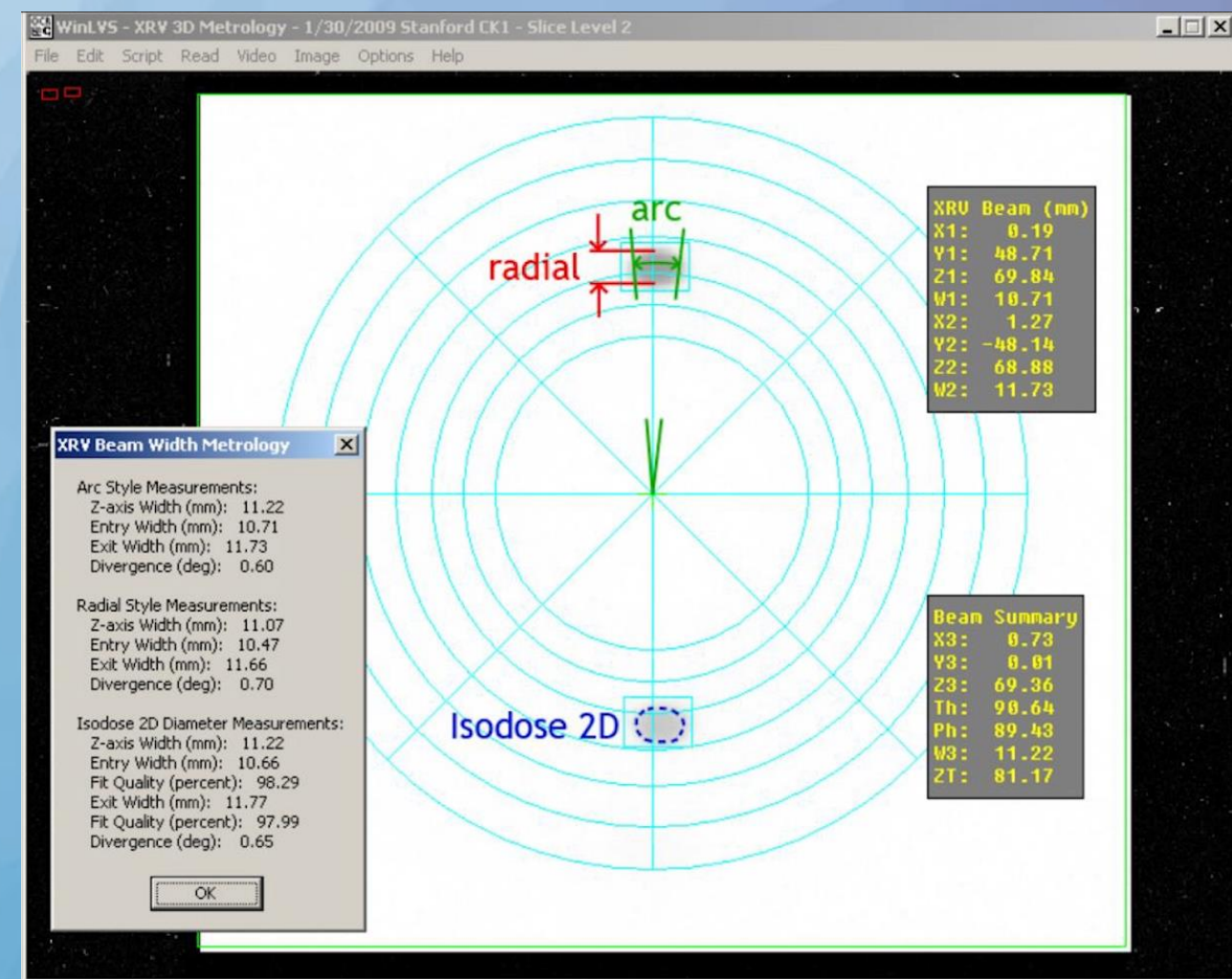
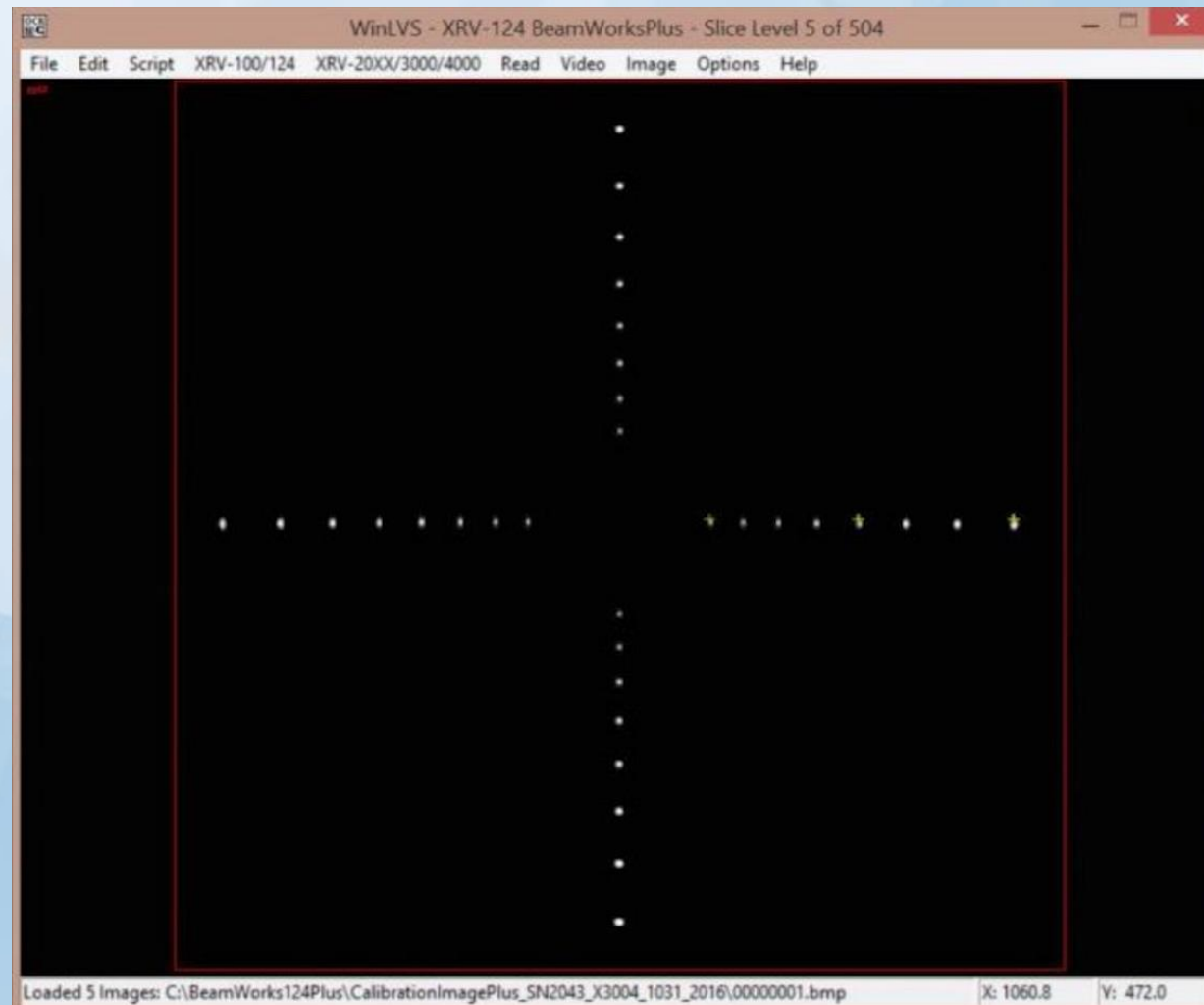
# XRV-124 Imaging Cone Features





The 32 imaging cone reference holes are backlit during calibration while running a specialized capture script in the BeamWorks software





The calibration script creates a composite image of the reference holes which is used to define the virtual 3D model used for precise beam XYZ position and diameter measurements



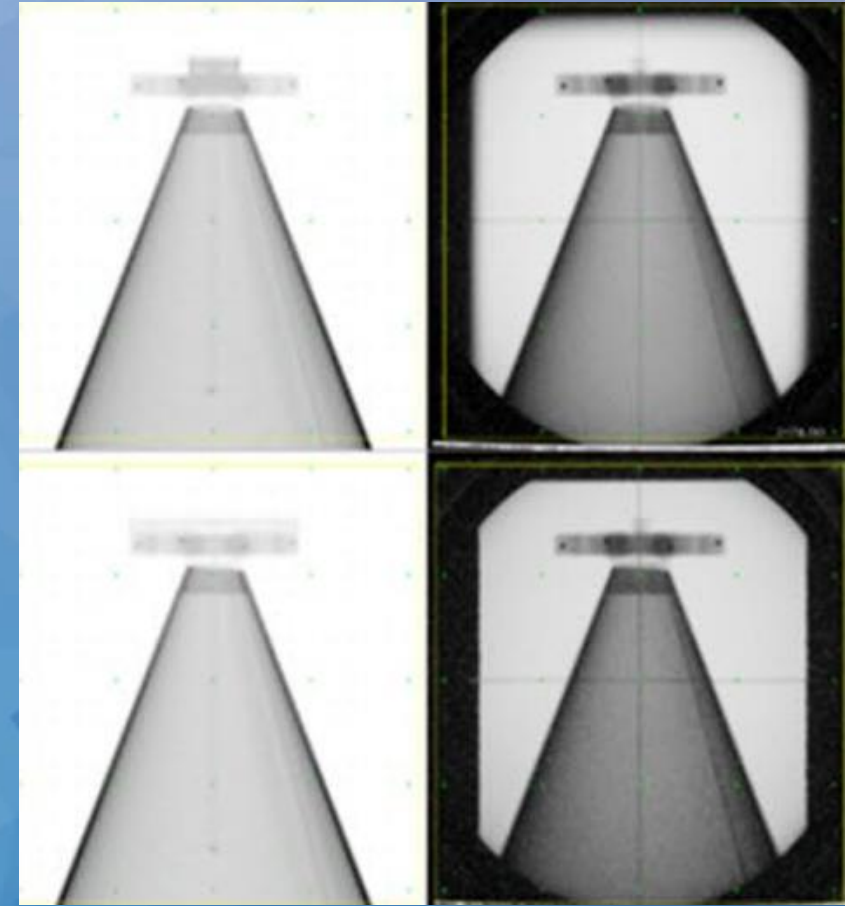
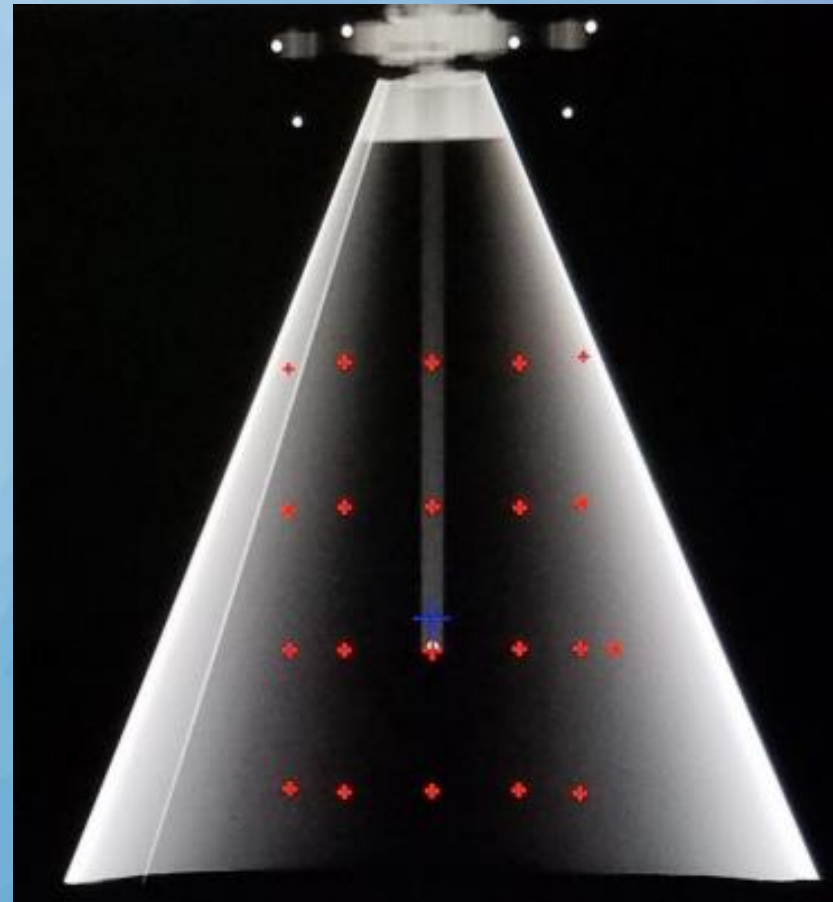
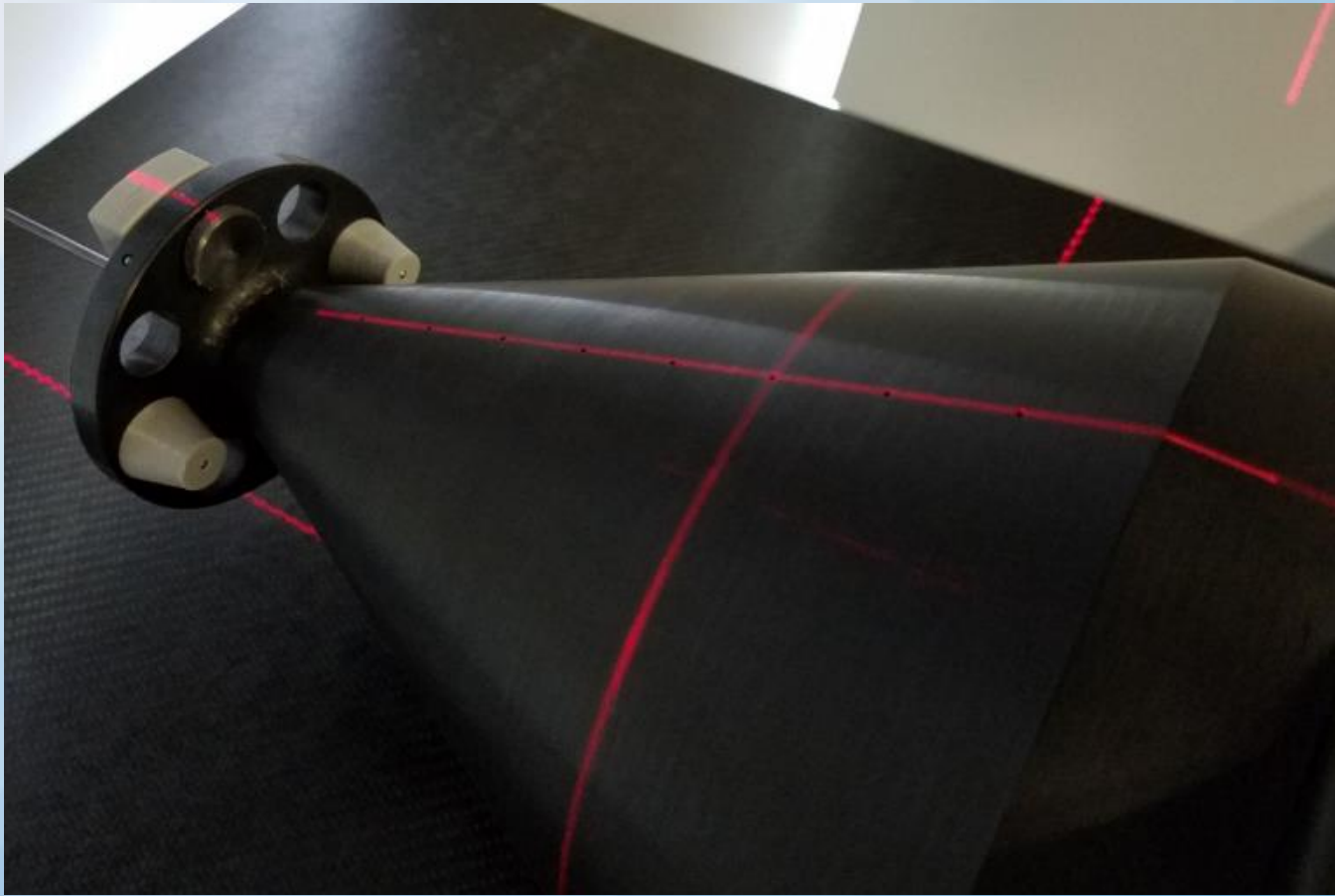
The shroud may be removed during beam capture if the lights and lasers in the treatment room are turned off



The power-over-fiber-optic cable connects the USB3 cable from the XRV-124 phantom to the laptop or PC USB3 port



# Phantom Setup Procedure



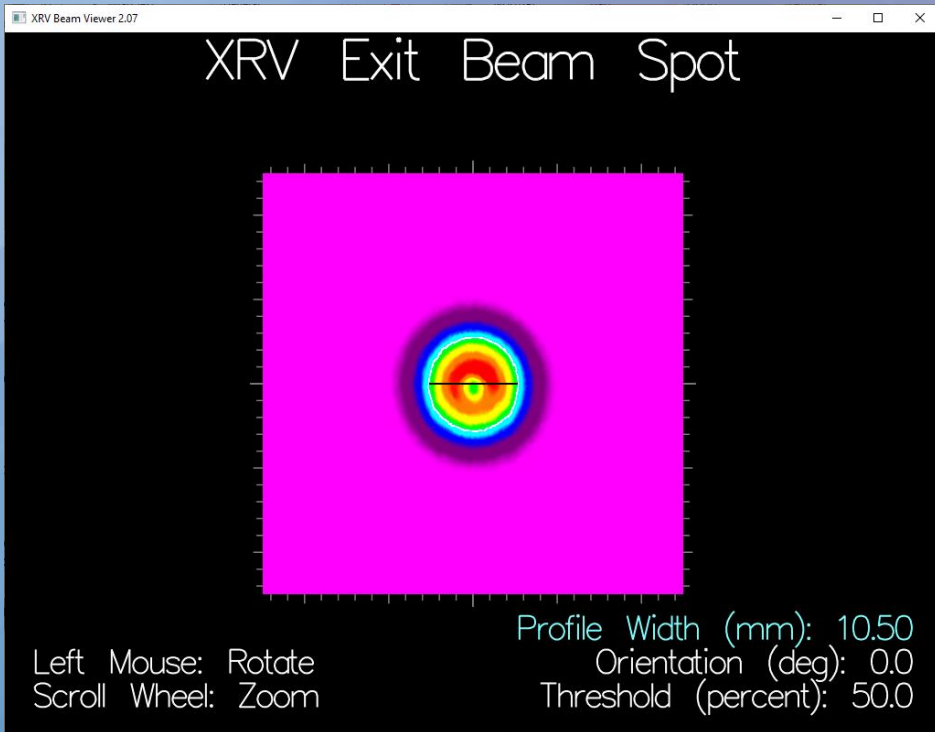
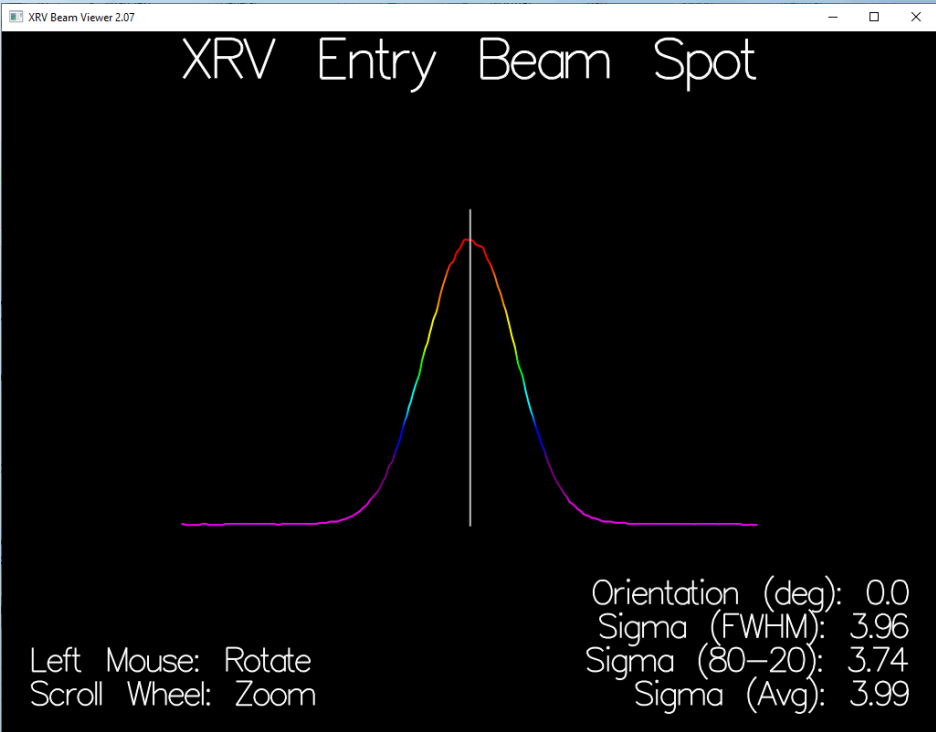
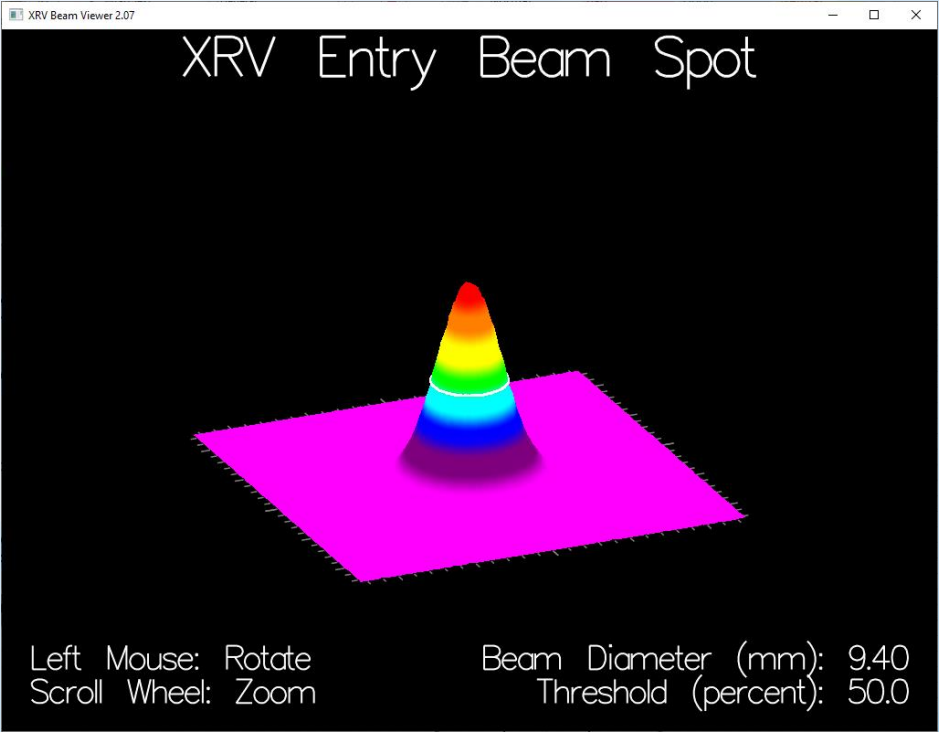
Laser alignment using external features

kV alignment using Fiducial BBs

Direct targeting of Probe-145 Fiducial within the cone

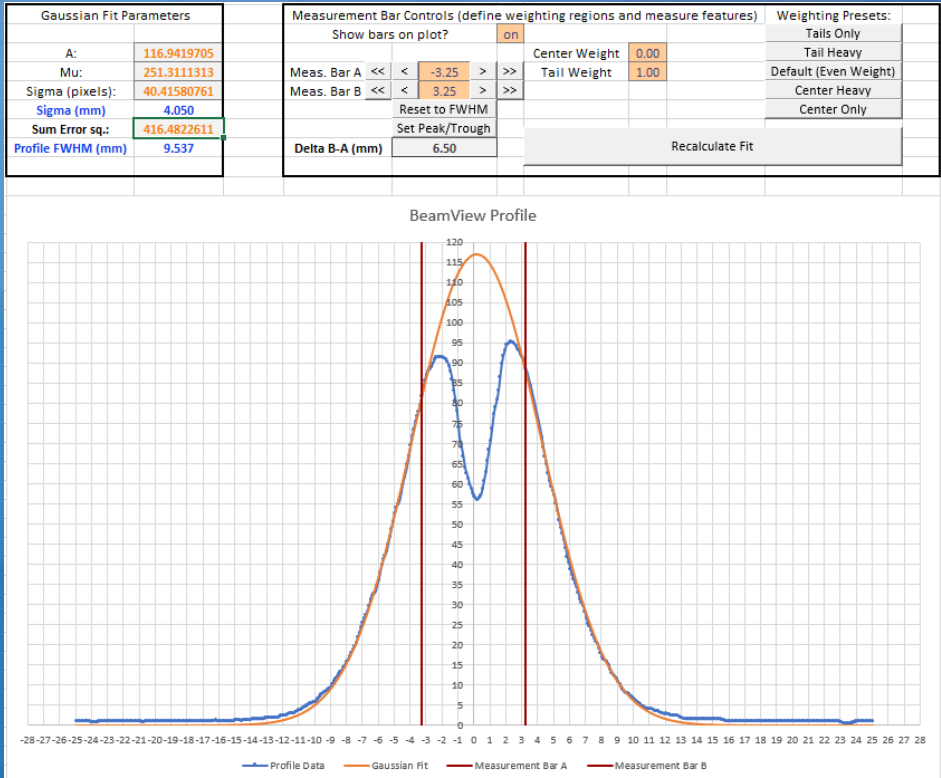
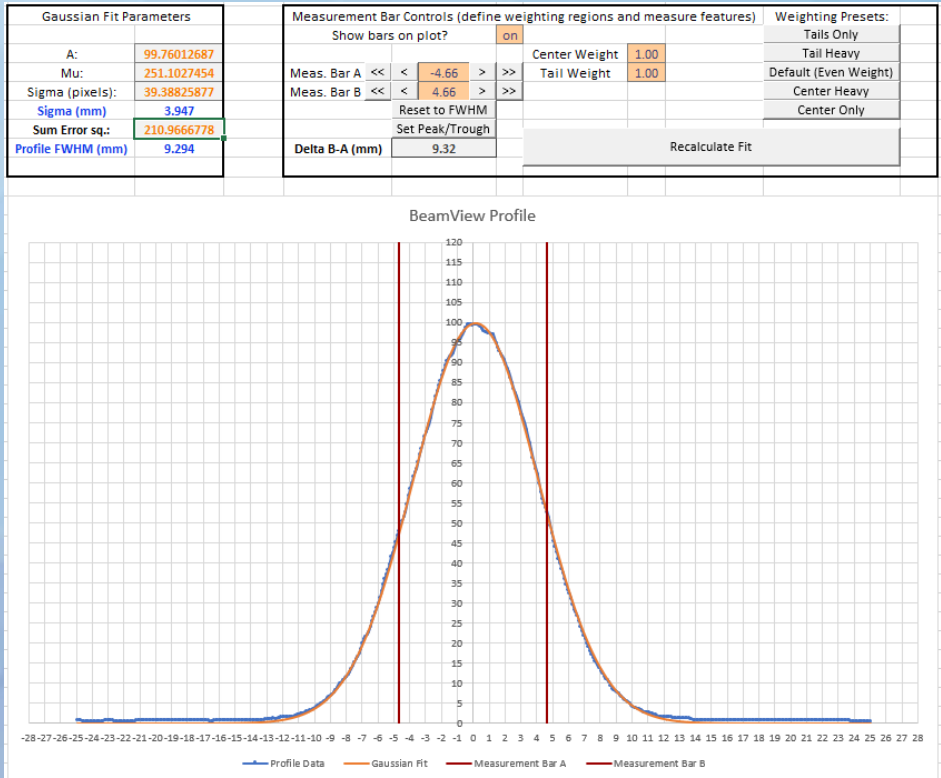






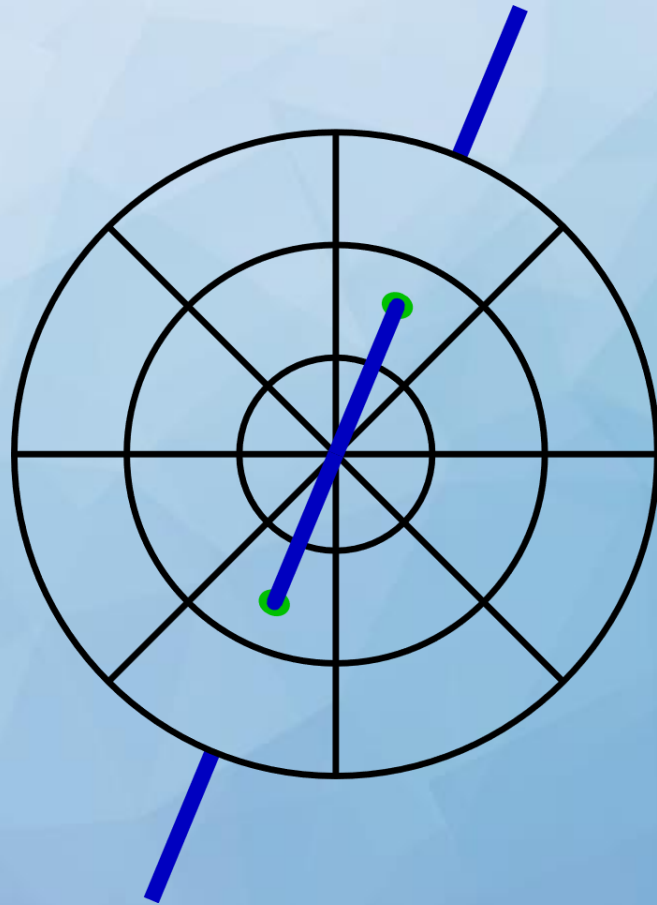
# Entry and Exit Spot Profile Measurements

# Winston-Lutz using Probe-145 Fiducial Weight adjusted Gaussian Fitting Module





# Digital Real-Time X-ray and Proton Beam Metrology Solutions



# Logos Systems

[www.LogosVisionSystem.com](http://www.LogosVisionSystem.com)