

INNOVATION • DEFENSE
NONPROLIFERATION • ENVIRONMENT



We make the world safer.

FY23 CritView Status Report

Scott Finrock
Senior Criticality Safety Engineer

NCSP Technical Program Review February 20-22, 2024

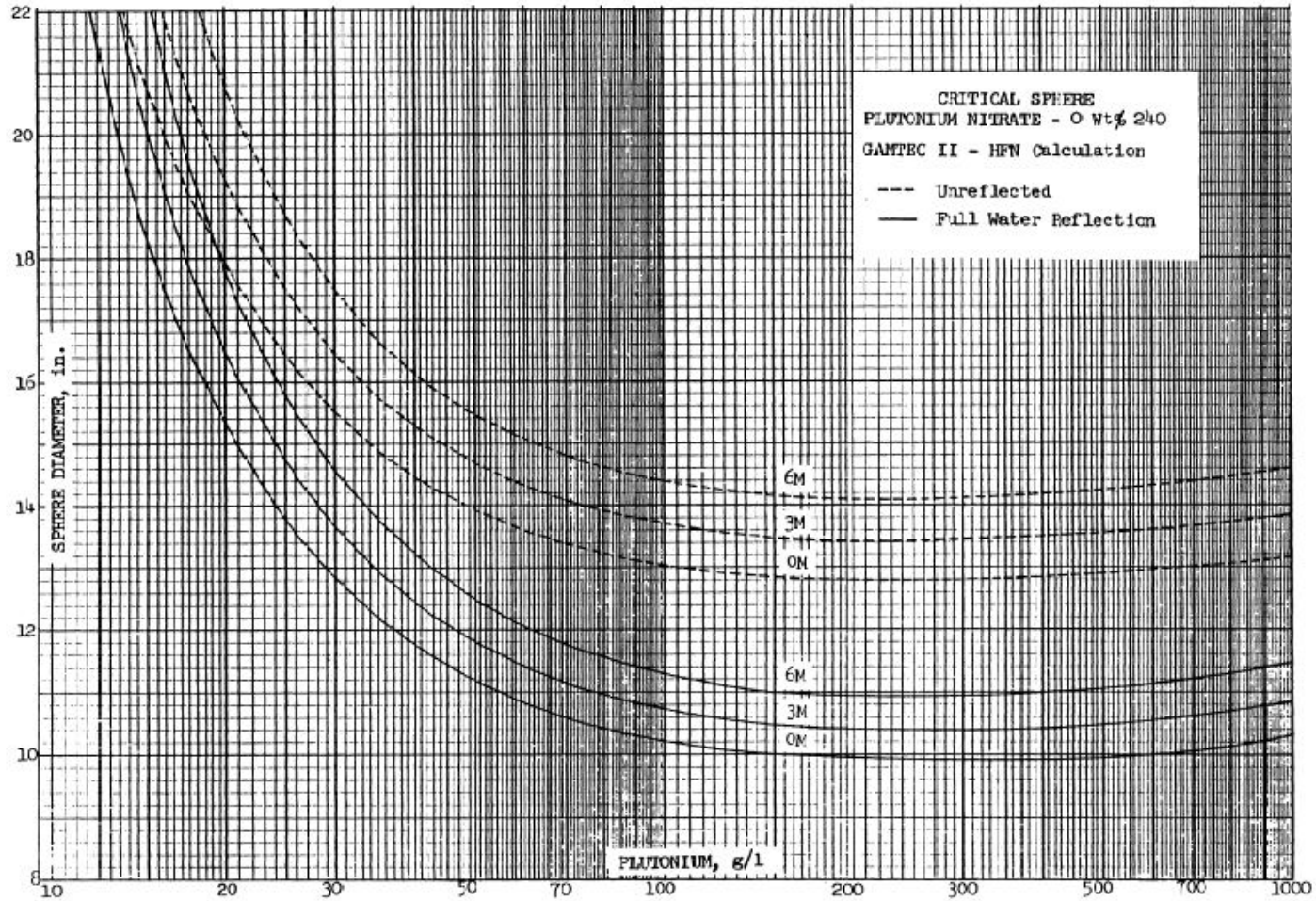
Provide an update on the current status of the CritView digital handbook

- **CritView Overview**
- **FY23 Tasks**
- **Future Work (FY24)**
- **FY23/FY24 budget summary**

- **Designed to be a digital equivalent to existing hardcopy handbooks**
- **Provides a versatile interface for ARH-600**
 - Data from other sources can be added as well
 - Allows users to customize the curve plots to fit their needs
- **Makes multiple handbooks and data sets available in one place**
- **Provides updated and well documented data (e.g., reproduces ARH-600 with MCNP)**

- **Updated CritView Database to include additional data from FY22**
 - All LA-10860 curves
 - SCALE calculated curves to match existing MCNP curves
 - Include cross-section set identifier for MCNP and SCALE curves
- **Produced Beta Version of CritView version 1.05**
 - Accommodate LA-10860 data
 - Added ability to probe curve (i.e., interpolate between data points)
 - Added some new parameters and units (e.g., Enrichment, and kg/L)
 - Minor bug fixes and general aesthetics

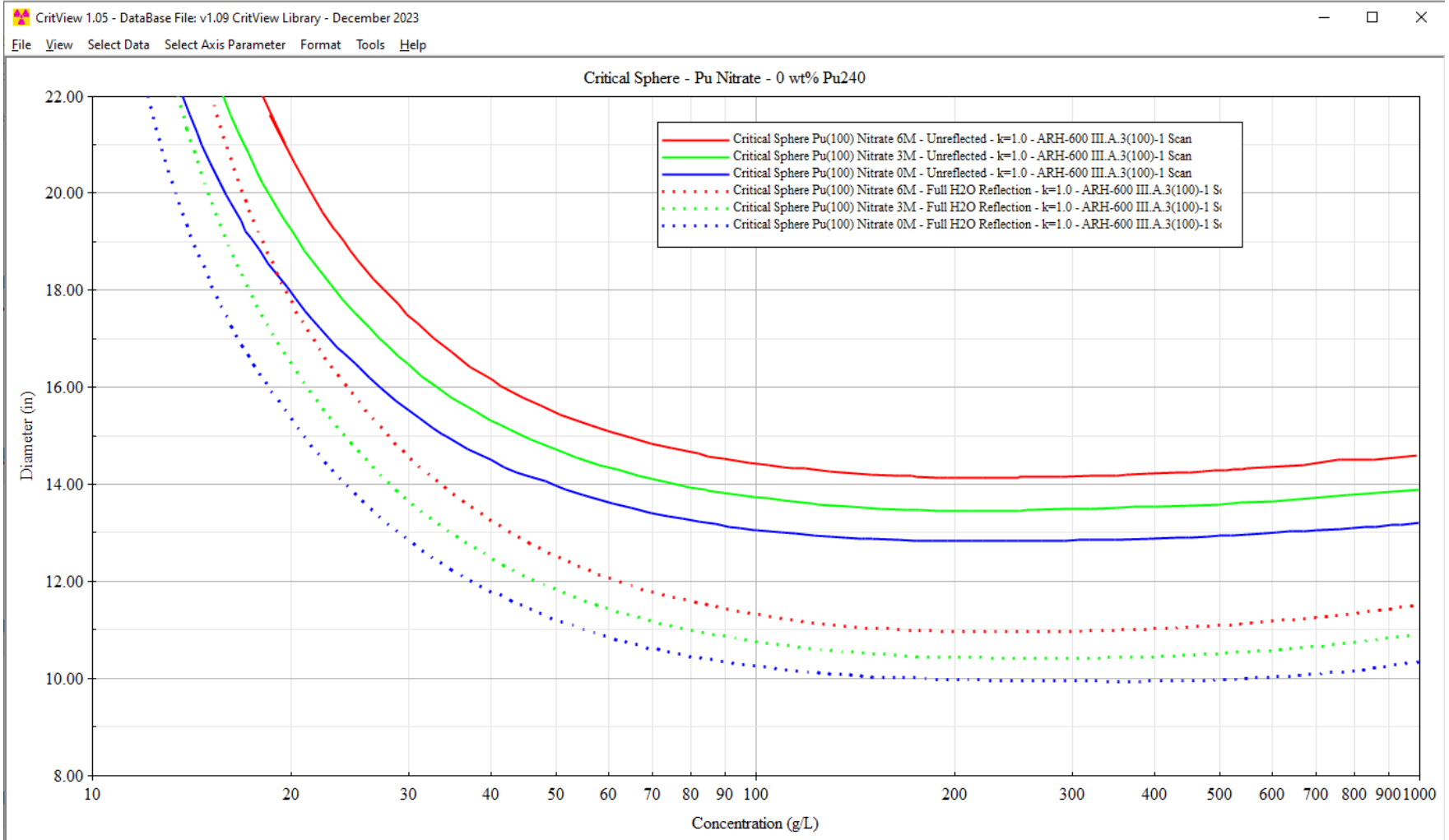
Example Graph from ARH-600



III.A.3.100-1

ARH-600

CritView v1.05 Showing ARH-600 Data



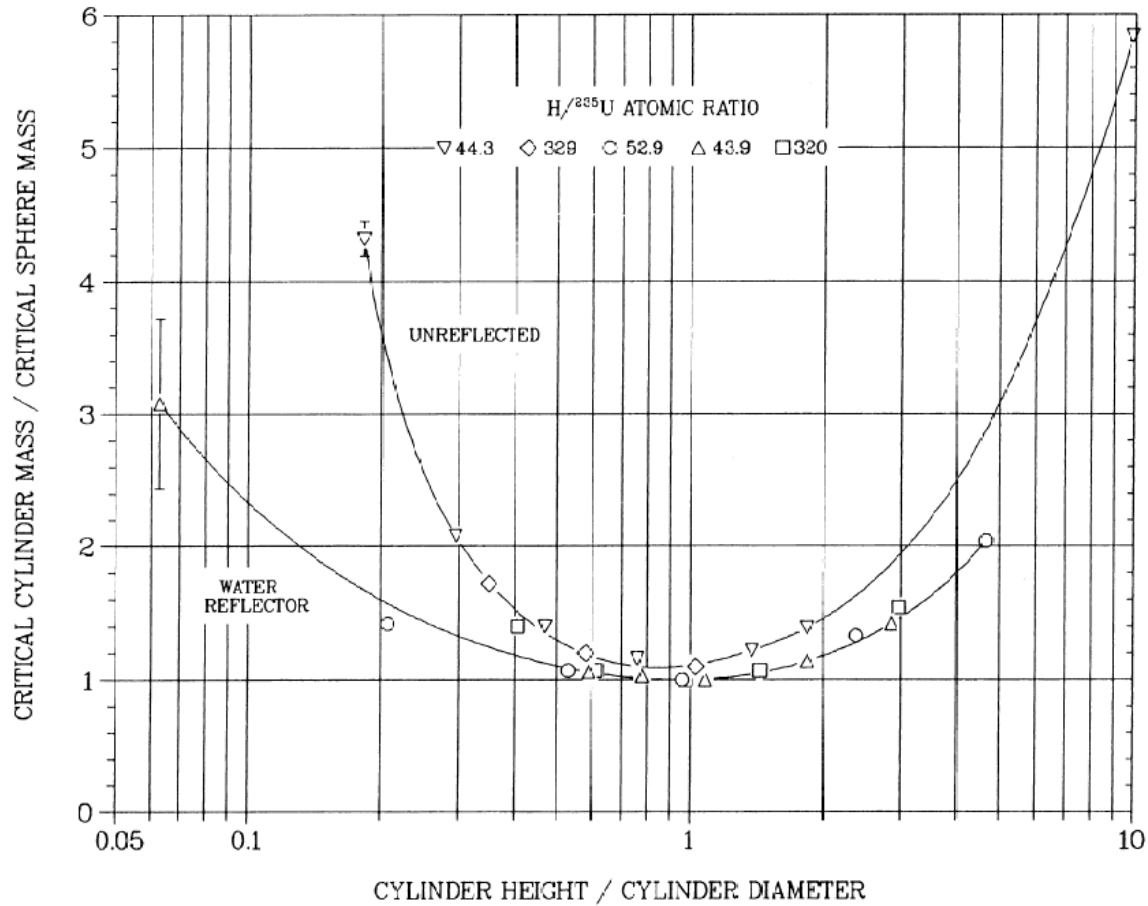
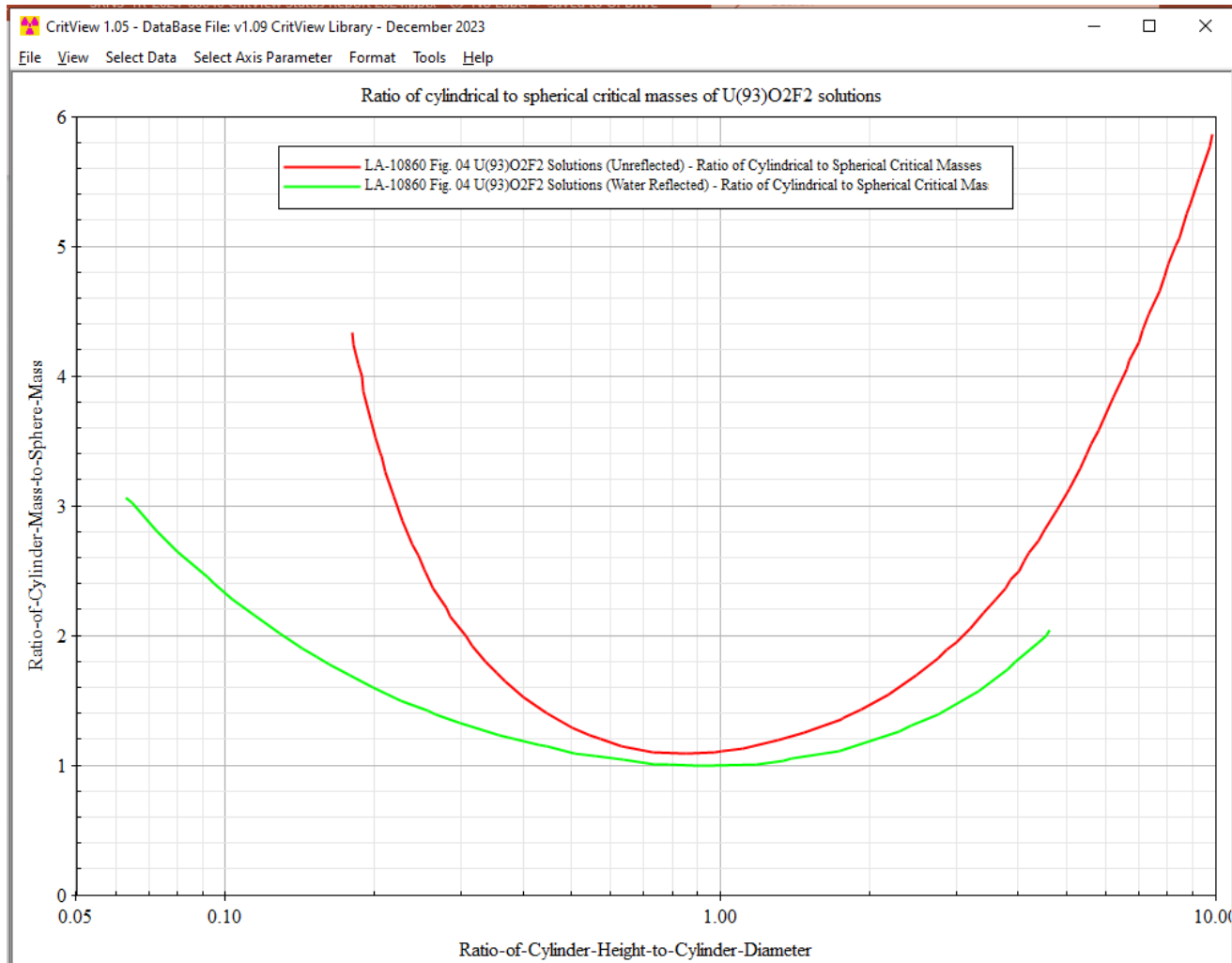


Fig. 4. The ratio of cylindrical to spherical critical masses of $U(93)O_2F_2$ solutions, unreflected and with water reflector, as a function of cylinder height to cylinder diameter ratio.



- **SRS Beta Testing**
- **Produce Release Version**
- **Obtain Clearance for Public Release**
- **Transmit to LLNL for NCSP Web Page**

- **FY23 SRS-IPD1 (CritView) received no direct funding due to carryover**
 - ~\$40K in carryover from prior years available
 - ~\$28K spent out of \$30K planned
 - Approximately \$23 K Carryover to FY24

