

## Ca-48 targets – home and abroad!

*Tuesday, 15 November 2016 11:00 (30 minutes)*

Using the method of reduction/distillation<sup>1</sup>, one can prepare high purity films of robust and ductile calcium metal for use as targets in nuclear physics experiments. These targets however are extremely air-sensitive and procedures must be developed for their handling and use without exposure to air<sup>2</sup>. In addition, the low natural abundance of the isotope Ca-48 provides an increased incentive for the best efficiencies available in their preparation. In most instances the Ca-48 target will be used on a carrier foil (backing) and a thin covering of similar material is employed to further reduce re-oxidation. Un-backed metallic targets are rarely produced due to these concerns. Here we describe the preparation of Ca-48 targets employing BOTH a thin gold backing and covering for use here at home, Argonne National Laboratory (ANL), as well as abroad, to Osaka University. For the shipments overseas, much care and preparation were necessary to insure a safe arrival and that the targets remained un-oxidized.

<sup>1</sup>Ed Kobisk, Report AERE-R 5097 (1965) 103

<sup>2</sup>J.D.Stinson, INTDS Proceedings (1974) 100

**Primary author:** Mr GREENE, John (Argonne National Laboratory)

**Co-authors:** Dr CARPENTER, Michael (Physics Division, Argonne National Laboratory, 9700 South Cass Avenue.); Dr JANSSENS, Robert V.F. (Physics Division, Argonne National Laboratory, 9700 South Cass Avenue,)

**Presenter:** Mr GREENE, John (Argonne National Laboratory)

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