

Contribution ID: 48

Type: Talk

## Another Isomer in 102Rh?

Tuesday, 3 May 2022 17:00 (15 minutes)

It is well known that 102Rh has a ground state with t1/2 = 207.3 days and an isomer at an excitation energy of 140.7 keV with t1/2 = 3.742-years. Following the irradiation of a rhodium chloride target with 35-MeV protons from Lawrence Berkeley National Laboratory's 88-Inch Cyclotron, we chemically separated the rhodium and palladium fractions and then counted them separately using high-purity Ge detectors. In the Rh fraction, we observed a growth over time in the intensities of several gamma-ray lines attributable to the decays of 102Rhg.m. One possible interpretation of these results is that there exists a previously unobserved second isomer in 102Rh. From our measurements, we deduce a half-life of this potential new isomer of approximately 46 hours. Puzzles associated with these observations will be presented.

Primary author: NORMAN, Eric (Univ. of California at Berkeley)Presenter: NORMAN, Eric (Univ. of California at Berkeley)Session Classification: Evening Online Session