

Abstract Submitted  
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**Discovery of Isotopes**<sup>1</sup> ERIN MAY, MICHAEL THOENNESSEN — To date, no comprehensive study has been undertaken regarding the initial detection and identification of isotopes. At NSCL, a project has been initiated to catalog and report the initial observation of every isotope. The conditions characterizing the successful discovery of an isotope include a clear and unambiguous mass and element identification through decay curves, mass spectroscopy, gamma-ray spectra, and/or relationships to other isotopes, as well as the publication of such findings in a refereed journal. I will present the documentation for eight elements: cesium, lanthanum, praseodymium, promethium, samarium, europium, gadolinium, and terbium. The year and author of each initial publication along with the location and methods of production and identification will be shown. A summary and overview of all ~3000 isotopes documented so far as a function of discovery year, method and place will also be presented.

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