

## Ununoctium has no naturally-occurring isotopes.



Experiments conducted at Dubna, Russian Federation, at the Flerov Laboratory of Nuclear Reactions (by workers from the Joint Institute for Nuclear Research in Russia and the Lawrence Livermore National Laboratory in the United States), indicate that element 118 (ununoctium, Uuo) was produced — not a large quantity, though: one atom in the spring of 2002 and two more in 2005. Ununoctium's name represents the digits in 118: *un* = “one,” and *oct* = “eight.”

The 2002 experiment involved firing a beam of Calcium-48 at Californium-249. The experiment took four months and involved a beam of  $4 \times 10^{19}$  calcium ions to produce the single event believed to be the synthesis of element 118 (ununoctium). These experiments were carried out following calculations by Robert Smolanczuk (Soltan Institute for Nuclear Studies, Poland) on the fusion of atomic nuclei. His calculations suggested that it might be possible to make element 118 by fusing lead with krypton under carefully controlled conditions.

### Properties of Ununoctium

<b>Name</b>	Ununoctium
<b>Symbol</b>	Uuo
<b>Atomic number</b>	118
<b>Atomic weight</b>	[294]
<b>Standard state</b>	Presumably a gas at 298 °K
<b>CAS Registry ID</b>	54144-19-3
<b>Group in periodic table</b>	18
<b>Group name</b>	Noble gas
<b>Period in periodic table</b>	7
<b>Block in periodic table</b>	p-block
<b>Color</b>	Unknown, but probably a colorless gas
<b>Classification</b>	Non-metallic
<b>Melting point</b>	No data available
<b>Boiling point</b>	No data available
<b>Density of solid</b>	5.7 g/cm <sup>3</sup> (predicted)