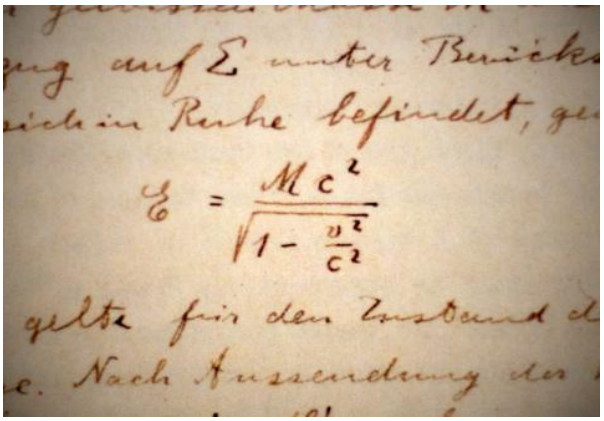
NUCLEAR ENERGY



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This image depicts a photo of Einstein's paper in which he writes that E=MC 2. It is believed to be the first time this world-changing equation was written for a published work. Photo of Einstein's paper by Peat Bakke; online via Flickr. License: CC BY 2.0

The crew of *K-19* faced the worst of all possible dangers at sea. To better understand why, we have to briefly examine the concept of nuclear energy.

Albert Einstein, noted by *Time Magazine* as "Person of the Century," was the first to comprehend that energy and mass (matter) are equivalent. When he wrote his world-changing paper ("Does the Inertia of a Body Depend Upon its Energy Content?"), the 26-year-old patent clerk was so forward-thinking he had no prior sources to cite. His paper, as originally published, was without footnotes.

In a startling departure from prior thinking, Einstein theorized (E=mc2) that matter could become energy (and energy could become matter) under the right circumstances. As he himself explained (follow the link to hear him):

> *...very small amounts of mass may be converted into a very large amount of energy and vice versa.*

Once Einstein's revolutionary theory was accepted—which did not happen overnight—scientists realized that enormous amounts of energy could be produced from splitting tiny particles of matter...like atoms. (For submarines, such a power source would later transform "boats that dived" into true sub-marine vessels that could remain underwater indefinitely.)

But HOW would such an energy transformation actually occur? How was it possible to "open" an atom?

See Alignments to State and Common Core standards for this story online at:
http://www.awesomestories.com/asset/AcademicAlignment/NUCLEAR-ENERGY-K19-Widowmaker

See Learning Tasks for this story online at:
http://www.awesomestories.com/asset/AcademicActivities/NUCLEAR-ENERGY-K19-Widowmaker

Media Stream

Young Albert Einstein Photograph
Image online, courtesy the East Tennessee State University website.
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