

Identifying ships in photos of the Baker nuclear test

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The "Baker" explosion, part of Operation Crossroads, a nuclear weapon test by the United States military at Bikini Atoll, Micronesia, on 25 July 1946. Source: Wikimedia Commons.

This photograph above is probably one of the best known and most impressive when it comes to illustrating the scale and impact of a nuclear test – even if the explosion was a small one even by the standards of the 1960s. It shows the fifth-ever explosion of a nuclear bomb, about two years after the first-ever nuclear explosion in the Trinity test and one year after the attacks on Hiroshima and Nagasaki.

Military ships were placed in the vicinity of the two explosions of the test series in order to observe the effects of a nuclear explosion at close range. Most of the ships were in derelict state, dating back to the Second World War, which had ended only a year earlier. Among

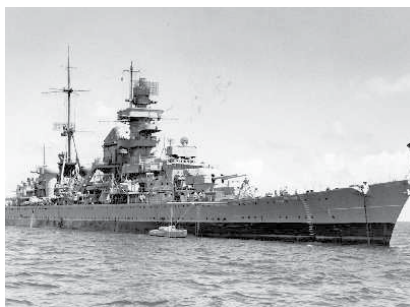
the most notable were the Japanese battleship *Nagato*, the German cruiser *Prinz Eugen* and the U.S. aircraft carrier *Saratoga*. After the two test explosions, all three – and several more ships – eventually sank and were abandoned for being too radioactive to salvage.

A part of one of those ships, salvaged over 30 years after the nuclear tests, has been on display in northern Germany close to where I live, since 1979. It is one of the three propellers of the *Prinz Eugen*. After first reading about it, I came back to the topic every now and again, mostly because I was incredulous that this was a part that had actually been in the vicinity of the Crossroads nuclear explosions.

Given that it really does seem to be genuine, and neither a reproduction nor a part replaced before 1946, I went to visit the Laboe Naval Memorial in Germany. It is a curious memorial with an ambiguous character that is well reflective of the site's history, conceived some 10 years after the First World War, inaugurated by the Nazis and later rededicated to peaceful seas and the victims of all

seafaring countries. In my opinion, however, the Memorial does not do a very convincing job of renouncing the glorification and romanticization of murderous naval warfare and truly exhibiting an international and intercultural spirit.

After seeing the propeller, I wanted to pick out the *Prinz Eugen* in photographs of the Crossroads nuclear tests. There did not seem to be, however, any annotated photographs detailing the identities of more than one or two ships in the vicinity of the explosion. After some research, I came across an online edition of *The Archeology of the*



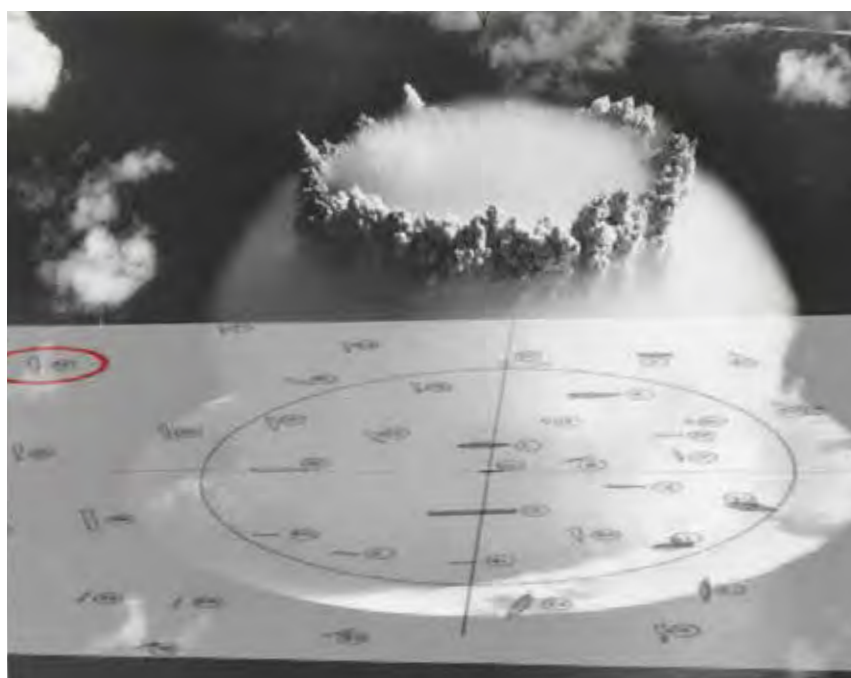
The German cruiser *Prinz Eugen* (1946).



Prinz Eugen's propeller at Laboe Naval Memorial, Germany. Picture: Darkone on Wikimedia Commons, CC-BY-SA 2.5.

Target vessels:

- 36 IX Prinz Eugen
- 47 DD Wllson
- 51 YOG-83
- 44 DD Trippe
- 29 DD Mayrant
- 11 ARDC-13
- 38 CA Salt Lake City
- 17 APA Briscoe
- 21 APA Catron
- 16 APA Bracken



View from the South, the Prinz Eugen is marked in red.

Atomic Bomb: A Submerged Cultural Resources Assessment of the Sunken Fleet of Operation Crossroads at Bikini and Kwajalein Atoll Lagoons, published and hosted by the U.S. National Park Service. Chapter Two by James P. Delgado features the layout of the sites of both tests conducted during Operation Crossroads, and gives the names of many of the ships involved. The famous view from the island towards the explosion, however, was photographed at an angle that makes it difficult to assess the relative positions of the ships and cross-reference them with the map. A

perspective from above is much better suited for this, and there are high-quality photographs of the moment of the Baker explosion from different angles.

I referenced the map for the Baker test with aerial photographs of the explosion. I used the Perspective Tool of GIMP, a photo editing software, to overlay photographs from two different angles with appropriately distorted versions of the map. I cross-referenced the positions of the ships in both photographs, cloud shapes, the incident angle of the sun and the

lighting/shades of the ships to make what I believe is a good match between the map and both photographs. The annotated pictures and lists depicted here give the names of those ships I have identified in the map-overlaid photographs with reasonable certainty.

This article has been adapted from the original post that appeared on Michael Bükler's blog: gebloggings.wordpress.com.

BIOGRAPHICAL NOTE



MICHAEL BÜKLER

studied Physics in Hamburg and specialized in nuclear weapons and nuclear arms control at the Carl Friedrich von Weizsäcker-Centre for Science and Peace Research. He works as a science communicator and science journalist, explaining physics-related topics to the public through talks and the media. His topics include nuclear weapons and nuclear testing.