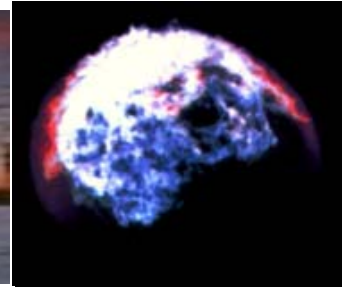


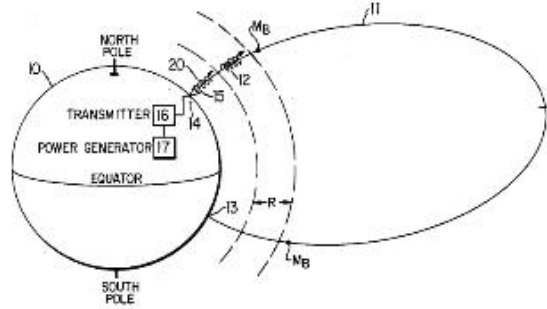
Starfish Prime, 1962, 400 km



HAARP



Bluegill Prime, 1962, 31 mile



U. S. PATENT 4,686,605

## INTRODUCTION

[HAARP](#) is a large phased array electromagnetic wave generator located in Alaska. The involvement of Dr. [Bernard Eastlund](#) in its creation has been well documented in [books](#) and in [magazine articles](#) and [newspapers](#). During the period in which many of the books and articles were written, Dr. Eastlund was under a 15 year confidentiality agreement with ARCO (The Atlantic Richfield Company). That confidentiality agreement has now matured. This web site will present information regarding the development of the ARCO patents and the founding of APTI (Now owned by AES Corporation) the corporation managing the HAARP facility. (The ARCO patents referred to in this web site are three patents that Dr. Eastlund assigned to ARCO because he was a consultant. They are 1) U. S. Patent 4,686,605, 4,712,155 and 5,038,664.

The web site is divided into four sections: The [HAARPROOTS](#) section presents historical material from the early period of the development of the inventions. The [ROADMAP](#) is a compendium of most of the ideas developed between 1984 and 1987 with ARCO. [HAARP3600000WATT](#) describes the present status of HAARP related to the ARCO patents. The [HAARPASAT](#) section describes a potentially destabilizing applications of missile defense and as an Anti-Satellite-Weapon. (ASAT). [HAARPWEATHER](#) discusses potential impacts of the HAARP device on weather and weather research.

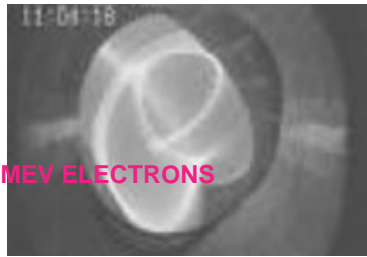
## HIGH ALTITUDE NUCLEAR EXPLOSIONS

One of the inspirations for the ARCO patents came from Dr. Eastlund's friendship with Nicholas Christofilos, a research scientist at the Livermore National Laboratory who was the inspiration of a series of [high altitude nuclear explosions](#). The residue of these tests was a high population of MEV electrons trapped in what are now referred to as the Van Allen belts. These electrons presented a danger to satellites because of their ability to penetrate solids, and to heat or disable materials in the satellites.

## LABORATORY GENERATED MEV ELECTRONS

Eastlund combined this knowledge base with a means of creating MEV electrons that he was familiar with through a former position as a physicist with the U. S. Atomic energy program. A resonant heating method of creating MEV electrons using RF waves was developed and exploited by the Oak Ridge National Laboratory (ORNL) Subsequent plasma devices have generated MEV electrons in the laboratory with resonant heating. A figure from the "[Large Helical Device](#)" project depicts such electrons confined by a magnetic field.





## THE ARCO PATENTS (ASSIGNED TO APTI)

Eastlund combined the ideas of MEV electrons in space with the technology to generate MEV electrons using electromagnetic waves to create the idea of a missile shield and other applications of MEV electrons by inventing a large antenna array in Alaska to project RF electromagnetic waves to intersect with the earth's geomagnetic field at high altitude. The subsequent relativistic electrons would destroy enemy missiles if they intersected with missile trajectories. See [HAARPMEELECTRONS](#).

The patents are:

"Method for Producing a Shell of Relativistic Particles at an Altitude Above the Earth's Surface"  
Bernard J. Eastlund inventor, US Patent Number: 5,038,664 Issue Date: 8/13/91, Assignee: APTI, Inc.

"Method and Apparatus For Altering a Region in the Earth's Atmosphere, Ionosphere, and/or Magnetosphere" Bernard J. Eastlund inventor, US Patent Number: 4,686,605 Issue Date: 8/11/87 Assignee: APTI, Inc.

"Method and Apparatus For Creating an Artificial Electron Cyclotron Heating Region of Plasma"  
Bernard J. Eastlund and Simon Ramo inventors, Patent Number: 4,712,155 Issue Date: 1/28/85 Assignee: APTI, Inc.

Note that all of these patents were filed before any subcontractors were involved with the project. The patent issued in 1991 had been held up because it was classified as secret for 5 years.

**MEV ELECTRONS** the HAARP system, or a system like it only larger, could accelerate copious numbers of MEV electrons along magnetic field lines in the atmosphere, then, in our opinion, this could be the greatest threat to modern military satellite technology. A geosynchronous satellite could be eliminated within 20 minutes. There is some indication that other countries, such as China are working on such technologies. See [HAARPMEELECTRONS](#)