

Bernoulli's: Flight/Lift?

Construction of the airfield and facilities that would eventually be known as Ellsworth Air Force Base began in January 1942 on the site of what had been the Rapid City Regional Airport. It was originally known as the Rapid City Army Airbase. In 1953, it was renamed in honor of base commander Brig. Gen. Richard E. Ellsworth, who was killed in the crash of an RB-36 bomber in Newfoundland. Learn more about the base's construction and its evolving mission from the end of World War II to the middle of the Cold War ([More](#)).



The airfield control tower under construction, 1942. Courtesy Historical Footprints, Inc. of Lead, South Dakota

The 44th Missile Wing was established at Ellsworth Air Force Base in 1962. It's job was to maintain and, if necessary, operate the Minuteman intercontinental ballistic missile systems and launch facilities established in some 150 locations around Western South Dakota.

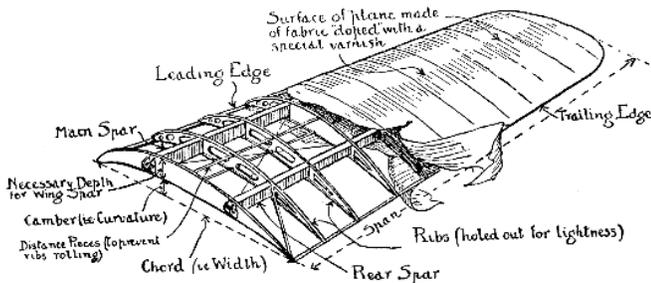


Ellsworth Air Force Base - Courtesy Historical Footprints, Inc. of Lead, South Dakota

[Learn more](#) about the construction of the facilities and the evolution of the 44th Missile Wing's mission during a twenty year period between 1962 and 1982.

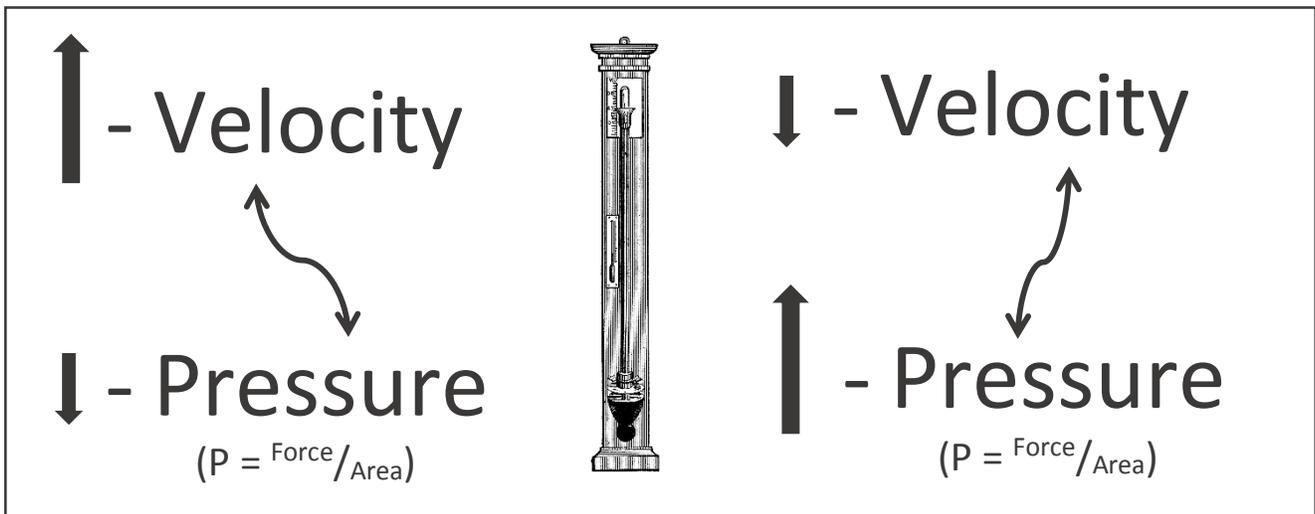
➤ **Bernoulli's Principle (Demonstrations)**

Daniel Bernoulli was a Swiss mathematician during the eighteenth century. Bernoulli studied a physical phenomenon/relationship between the velocity of a fluid and pressure. His observations and applied mathematical explanations became known as Bernoulli's Principle.



Bernoulli's Principle describes a phenomenon in which the pressure (pressure is the amount of force applied over an area) of a fluid (gas or liquid) changes with a change in the velocity of the fluid. Bernoulli observed that an increase in the velocity of the

fluid resulted in a decrease in the pressure of the fluid. Also, a decrease in the velocity of a fluid resulted in an increase in the pressure.



The lab write-up below includes many demonstrations that highlight Bernoulli's Principle. The lab write-up starts with flight/lift and continues with additional related demonstrations. Each section includes a small explanation and related video lesson. A detailed explanation of Bernoulli's Principle, with related web resources (flight, airfoils, forces, etc.), is also included.

- [Demonstrations](#)
- [Related Video Lessons](#) (Scroll Down)