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( Photo : ESA / Herschel / PACS / MESS Key Programme Supernova Remnant Team ;

NASA, ESA and Allison Loll / Jeff Hester ( Arizona State University )

## Narration ( *from the Newspaper* )

Deep inside the Crab Nebula, researchers have discovered the first evidence ever of a noble gas-based compound in space.

A wallflower, argon is so reluctant to join with others that its name is the Greek word for "inactive." The element comes from the group known as noble gases, which includes helium and other similarly independent spirits.

However, according to a new study published in the journal *Science*, argon appears to have found a friend. Using the Herschel space observatory, researchers detected signs of a molecule known as argon hydride in the nebula first noted by Chinese astronomers almost 1,000 years ago.

"At first, the discovery seemed bizarre," said lead researcher Michael Barlow from University College London. "With hot gas still expanding at high speeds after the explosion, a supernova remnant is a harsh, hostile environment, and one of the places where we least expected to find a noble-gas based molecule."

Apparently, this was exactly what argon needed to get out of its comfort zone, the researchers found. "The strange thing is that it is the harsh conditions in a supernova remnant that seem to be responsible for some of the argon finding a partner with hydrogen," said Paul Goldsmith of NASA's Jet Propulsion Laboratory, Pasadena, Calif.