# Article information:

Medium-density amorphous ice | Science
<https://vpnlib.njtech.edu.cn:10443/https/webvpn0820f96587eff77599bd32f16972ec64/doi/10.1126/science.abq2105>

# Article summary:

1. Rosu-Finsen et al. discovered a new form of ice, medium-density amorphous ice (MDA), formed by ball milling hexagonal ice at low temperatures.

2. MDA is distinguished by its distinct density and structure, which opens up questions about the stable amorphous structure of this important material.

3. The compression of MDA at low temperature leads to a sharp increase in its recrystallization enthalpy, highlighting that H2O can be a high-energy geophysical material.

# Article rating:

Appears well balanced: The article presents the information in a reliable and balanced way, without biases and prejudices. The claims made in the article are well supported and, where applicable, all sides of the argument are given opportunity to present their point of view. The article appears trustworthy and reliable.

# Article analysis:

The article is generally reliable and trustworthy, as it provides evidence for the claims made and explores counterarguments where appropriate. The authors provide detailed descriptions of the experiments conducted to discover MDA, as well as diagrams and figures to illustrate their findings. Furthermore, they discuss potential implications of their findings on cosmological processes and anomalies of liquid water.

The article does not appear to be biased or one-sided in its reporting; it presents both sides equally and acknowledges potential counterarguments where appropriate. It also does not contain any promotional content or partiality towards any particular viewpoint or opinion. Additionally, the article notes possible risks associated with its findings, such as the possibility that MDA may be a heavily sheared crystalline state rather than the true glassy state of liquid water.

In terms of missing points of consideration or evidence for claims made, there are no major issues with the article; all claims are supported by evidence from experiments conducted by Rosu-Finsen et al., as well as other research studies referenced throughout the text.

# Topics for further research:

* Molecular Dynamics Simulations of Liquid Water
* Properties of Supercooled Water
* Glass Transition Temperature of Water
* Anomalous Properties of Liquid Water
* Shear-Induced Crystallization of Water
* Molecular Dynamics of Amorphous Ice

# Report location:

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