Physics Nobel 2026 for Belgian-born Francis Halzen

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News

On **6 October 2026** the Royal Swedish Academy of Sciences awarded the **2026 Nobel Prize in Physics** solely to Belgian-born American physicist **Francis Halzen (82)** 'for **decisive contributions to the IceCube Neutrino Observatory and the discovery of high-energy neutrinos of astrophysical origin**'.

Key facts

Winner	**Francis Halzen**, born in **Tienen, Belgium**; US citizen
Works at	**University of Wisconsin–Madison**, USA
Observatory	**IceCube**: light sensors in **1 cubic km of ice at the South Pole** (Amundsen–Scott station); proposed by Halzen in 1988; completed **2011**
Significance	Opened 'a new kind of astronomy' (neutrino astronomy)
Prize money	**SEK 12 million** (about €1.1 million)

Background

- **Neutrino:** an elementary particle with **no electric charge and an extremely tiny mass**; it rarely interacts with matter, hence the **'ghost particle'**. Proposed by **Wolfgang Pauli (1930)**, named by **Enrico Fermi**, detected by **Cowan and Reines (1956)**.

- **How is it caught?** When a neutrino rarely hits the ice, the particles it creates give off **Cherenkov light**, picked up by sensors buried in the ice. Neutrinos come from the Sun, supernovae and 'blazars' near black holes.
- **Exam note: UPSC Prelims 2015** asked a question on IceCube.
- **Earlier Belgian Nobel: François Englert**, Physics 2013 (with Peter Higgs, Higgs mechanism). Prizes since 1901 under **Alfred Nobel's** will; the **Royal Swedish Academy of Sciences** awards Physics and Chemistry.

Tamil Nadu link: The **India-based Neutrino Observatory (INO)** was planned under a hill at **Pottipuram (Bodi West Hills), Theni district**, but stalled over environmental objections. Atmospheric neutrinos were first detected in the world at the **Kolar Gold Fields** (Karnataka) in **1965**. Physics Nobel laureates linked to Tamil Nadu: **C.V. Raman (1930, Tiruchirappalli)** and **S. Chandrasekhar (1983, educated in Chennai)**.

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