INFN PERUGIA

A.D. 1308 unipg

DIPARTIMENTO DI FISICA E GEOLOGIA

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Aula B, ore 14:30

A new kind of matter

Giulio Mezzadri

The BESIII collaboration has reported a major breakthrough in particle physics by gathering the most compelling experimental evidence to date regarding glueballs—hypothetical bound states composed exclusively of gluons, the force-mediating particles of the strong interaction. The best candidate is the X(2370) particle, whose detailed study strongly supports its nature as a predominantly glueball state predicted by Quantum Chromodynamics (QCD). This milestone achievement opens new avenues for testing the Standard Model and understanding the fundamental nature of matter and pure force. The presentation shows a brief overview of the results that led to this claim and the next steps.

