SEISMIC VELOCITY STRUCTURE AND FOCAL MECHANISMS OF THE UMBRIA MARCHE REGION CENTRAL ITALY FROM LOCAL EARTHQUAKES TOMOGRAPHY

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Following the 26 September 2019 Gubbio earthquake, attention centered on the seismic activity of the Umbria Marche region affected by the epicentral area, where a dense network of seismic stations, for a total complete dataset of about 3,000 instruments, has been deployed. The epicentral area covers an ellipse of approximately 4 km by 8 km, with a depth ranging from 5 to 8 km. The observed seismicity is interpreted as a result of ongoing tectonic activity and recent seismic events. The seismicity is characterized by a steady increase in the number of earthquakes, with a peak on 26 September 2019.

Seismicity

Introduction

Seismic Tomography

Geology

Seismicity

Kinematic Analysis

Figures and graphs show the seismicity pattern and the distribution of seismic events in the region. The seismicity is concentrated in a specific area, with a density of seismic events increasing towards the epicentral area. The seismicity pattern is consistent with the tectonic setting of the region, characterized by a subduction zone and a transform fault system. The seismicity is associated with the ongoing tectonic activity and recent seismic events in the region.