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Development of an analytical Instrument for soil gas fluxes measurements

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Direct measurement of soil gas flux is important in different fields of geosciences. For example, to study the compounds exchange between soil and atmosphere, or to explore possible link between gas release and dynamic of active fault including seismic activity.

We developed a chamber to measure carbon dioxide flux and meteorological parameters using low cost sensors and electronics to be used to quantify the possible flux from active fault.

We will show the instrument setup, the calibration system and results of laboratory tests to check the functionality, the ability to measure concentrations and fluxes and the possible correction for temperature and humidity. A preliminary filed application to identify active fault will be shown as well.