

# NaI-remoTES: Cryogenic detectors with delicate absorbers

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COSINUS (Cryogenic Observatory for Signals seen in Next generation Underground Searches) operates sodium iodide (NaI) as cryogenic scintillating calorimeter using transition edge sensors (TES) at temperatures around 15 mK. TES are commonly used in cryogenic calorimeters for their excellent energy resolution. However, due to the various manufacturing steps involved, the choice of absorbers does not include soft and hygroscopic crystals such as NaI.

To overcome this challenge COSINUS developed the remoTES design, a novel method to equip a wide range of absorbers with a TES. In this design, the TES is deposited on a separate wafer and thermally connected to the absorber via a gold link which consists of a bond wire and a gold pad for phonon collection. The remoTES was tested on Si, TeO<sub>2</sub>, and NaI and reached baseline resolutions below 100 eV, 200 eV, and 400 eV respectively. This talk provides a description of the remoTES design and the current status of optimization studies on NaI.

**Autore principale:** KELLERMANN, Moritz (Max Planck Institute for Physics)

**Relatore:** KELLERMANN, Moritz (Max Planck Institute for Physics)

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