

# CÉSAR DOMINGO

## I-TED: A COMPTON IMAGER TO EXPLORE RED-GIANT STARS IN THE LABORATORY

Nuclear reactions in the stars essentially have produced all the heavy chemical elements in our galaxy, in our environment and in ourselves. In short: “We are stardust”. By recreating the stellar nuclear reactions in the laboratory, one can learn not only about the origin of the matter around us, but also about the physical conditions inside red-giant stars along different evolutionary stages.

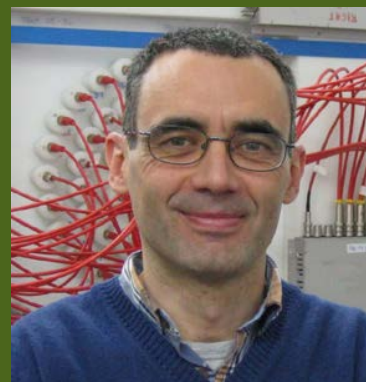
After a short astrophysical motivation, I will introduce several examples to illustrate also how both advances in gamma-ray detection apparatus and accelerators, have allowed one to inspect better such stellar reactions, and thus constrain the physical conditions inside stars.

Finally, current efforts to push further the detection-sensitivity limits will be presented, with special emphasis on the instrumentation aspects related to “useful” applications, such as gamma-ray imaging for a variety of things.



Instituto de Instrumentación  
para Imagen Molecular

## i3M Seminar



**César Domingo**

**Instituto de  
Física  
Corpuscular  
(IFIC), Valencia**

### **DATE AND PLACE**

22.11.2019 at 12.00

Salón de actos del  
cubo rojo

### **NEXT SEMINAR (04.12.)**

Noé Jiménez (UMIL)

Beyond conventional  
ultrasound imaging: super-  
resolution, functional and  
molecular imaging using  
acoustic waves