



**PhD Call for Applicants**  
**in**  
**Experimental**  
**Nuclear Astrophysics**  
**(June 1, 2016)**



A call for a PhD contract is open at IFIC (CSIC- University of Valencia) in the framework of the ERC funded consolidator project **HYMNS: High-sensitivity Measurements of key stellar Nucleo-Synthesis reactions**. This project aims at the development and implementation of a novel detection technique for the measurement of stellar neutron capture rates relevant for the slow (s-) process of nucleosynthesis.

The post is based in the Gamma and Neutron Spectroscopy Group (<http://webgamma.ific.uv.es/gamma/en/>) at IFIC (<http://ific.uv.es>). The successful candidate will develop his PhD work in advanced instrumentation for  $\gamma$ -ray detection optimized for its application to the measurement of neutron capture cross sections at CERN n\_TOF (Geneva). This experimental work comprises *i*) the development of advanced radiation detectors with  $\gamma$ -ray imaging capability, so-called i-TED, *ii*) first proof-of-concept measurements at CERN n\_TOF and *iii*) involvement in the measurement of neutron capture rates of astrophysical interest for s-process nucleosynthesis in massive stars. Developments, data taking and analysis, physics and astrophysics interpretation will be undertaken as full PhD activities.

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| Post         | Forefront research in experimental nuclear physics<br>Competitive salary                                     |
| Requisites   | Master degree<br>Availability to travel<br>Long stays abroad, mainly in Switzerland<br>Good level of English |
| Skills       | Physics studies (nuclear, electronics or theory)<br>Initiative<br>Good communication skills                  |
| Closing date | July 10 <sup>th</sup> , 2016   |
| Send:        | CV with two referee contacts<br>Academic record  |
| To:          | Dr. C. Domingo-Pardo<br><a href="mailto:domingo@ific.uv.es">domingo@ific.uv.es</a>                           |
| Subject:     | HYMNS PhD application [your family name]   |

Informal contacts are welcome ([domingo@ific.uv.es](mailto:domingo@ific.uv.es)).

**Post available to start in autumn 2016**