XXIX Canary Islands Winter School of Astrophysics "Applications of Radiative Transfer to Stellar and Planetary Atmospheres"

November 13th to 17th, 2017

La Laguna, Tenerife, Spain

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First announcement of the XXIX Canary Islands Winter School of Astrophysics

Applications of Radiative Transfer to Stellar and Planetary Atmospheres

La Laguna (Tenerife, Spain) -- November 13th to 17th, 2017

Website: www.iac.es/winterschool/2017/

Deadline for both the Registration and Applications is 23rd June 2017

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Since 1989, the Instituto de AstrofÃ-sica de Canarias organizes yearly a Winter School whose aim is to train PhD students and recent post-docs in frontier topics of Astrophysics.

The XXIX Canary Islands Winter School of Astrophysics, to be held in San Cristobal de La Laguna (Tenerife, Spain) in November 2017, focuses on Applications of Radiative Transfer to Stellar and Planetary Atmospheres.

The audience will be limited to 50 participants. The aim of this Winter School is to bring together in a relaxed working environment distinguished scientists who, in recent years, have paved the way to major advances in the treatment and applications of radiative transfer and young researchers who want to broaden their knowledge in this specific field of Astrophysics by attending advanced lectures and interchanging acquired expertise and skills among them.

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Distinguished specialists in their field of research have been invited to give advanced lectures on the following topics:

* Fundamental physical aspects of radiative transfer
* Mathematical background and computer codes
* Phenomenology and physics of atmospheres of early-type and late-type stars
* Phenomenology and physics of atmospheres of brown dwarfs and extrasolar giant planets
* Near IR high resolution spectroscopy

Lectures will be complemented by tutorial activity consisting in the running of standard computer codes to trace the effects of both physical assumptions and a different choice of key parameters on the stellar spectra synthesized in the case of both hot and cool stars.

Participants will have the opportunity to display their current work by presenting a poster.

The basic registration fee amounts to 350 euros and includes conference fee, welcome cocktail, morning and afternoon coffee during the lecture days, conference dinner, copy of the proceedings, and visit to the Teide observatory on November 18th (including lunch).

An optional daily trip to the Roque de los Muchachos Observatory (La Palma) will be organized on November 19th. The extra cost of 250 euros includes the flights from/to Tenerife/La Palma, transfers, lunch and a guided tour of the principal telescopes.

A limited number of grants will be provided by the organization to cover accommodation (double room - breakfast included - shared with another participant in Hotel Nivaria, a **** hotel in San Cristobal de La Laguna, where teachers and most participants are expected to stay).

Rationale of the school:
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The quantitative analysis of the electromagnetic radiation emitted by astrophysical objects is the unique tool we have at hands for the diagnostics of their physical properties. The study of stellar atmospheres has experienced in the last decades a great step forward, both in theory and computational techniques. However, a well-founded fear is starting to arise that, at the generational turnover, young practitioners in the field may lack in a firm grip on the underlying physics and use the available computer codes as black-boxes. In addition, radiative transfer in Astrophysics is living nowadays a period of transition from old to new fields