

Tipo de Comunicacion / Type of contribution:

Poster

Sesion Cientica / Scientific session:

Instrumentación y Supercomputación / Instrumentation and supercomputation

Título / Title:

AsteroModelGenerator: Creating your asteroseismic models and publish them in the Virtual Observatory.

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Resumen / Summary:

Context: In order to publish scientific content on platforms that help the scientific community is increasingly necessary to synthesize and organize information. Based this idea, in the field of astronomical research, the international initiative called Virtual Observatory (VO) was created. Currently, this platform is widely used by this scientific community. As a new project, the astronomical groups of the Instituto de Astrofísica de Andalucía (IAA-CSIC) and the University of Granada (UGR) together with Spanish VO have created a VO service called TOUCAN[1] that handles detailed and accurate information about asteroseismology theoretical models. TOUCAN provides tools for searching, obtaining (downloading) and representing result.

[1]. TOUCAN: A VO tool for asteroseismology. Scientific preparation and utilization of the PLATO mission.

MAIN GOAL: The tool is in the final phase of development and will soon be accessible by the scientific community. However, the generation of asteroseismic models on distributed platforms and their subsequent inclusion in the VO TOUCAN service is a very expensive process.

In order to address this, a tool called AsteroModelGenerator has been developed entirely in the python language. This tool allows the automatic generation upon request of a large number of models described by a user interface, using multiple computing platforms (especially dedicated heterogeneous servers) and subsequent publication in the VO TOUCAN service. This requires the creation not only large numbers of models, but also relational Data Bases and CVS files that have all the necessary information for TOUCAN. OTHER GOALS: With this tool we create a fast and automatic process for the building of huge grids of models. The tool also performs the verification and quality control of data in order to publish in VO TOUCAN service. Thus, we achieve diffusion in the scientific community.