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COROT FIRST RESULTS - LOOKING INSIDE THE STARS

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Abstract. CoRoT has now proven its ability to measure stellar luminosity variations down to the part-per-million level, over long and quasi uninterrupted periods (up to 150 days). These data carry a wealth of information on the interior of very different stars in various evolution stages. The three first runs are being analysed by the CoRoT community, unveiling stellar oscillations with unprecedented sensitivity and precision. With a few examples, we illustrate how CoRoT is opening a new era in stellar seismology and in stellar physics more generally.

The backbone of this new era is constituted of an ambitious program of seismology projects including CoRoT(2007-...), Kepler (2009-...), Siamois (2012?-...), Song (2012?-...), Plato (2017?-...),... It is also relying on the impressive progresses made simultaneously in theoretical developments of transport processes in stars (modeling rotation and elements mixing or segregation), in High angular resolution observations (bringing radii and oblateness measurements), spectropolarimetry (with Espadon, Narval,...), and will make intensive use of the distances determined with GAIA (2011-...).

We are now looking inside the stars.

The results presented at this conference can be found in Michel et al. (2008), see also http://www.univie.ac.at/tops/CoAst/ vol. 156.

Acknowledgements

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References

Michel, E., et al. 2008, Communications in Asteroseismology, 156, in press
http://www.univie.ac.at/tops/CoAst/

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