PLATO WP120 2016

Meeting at Meudon, France - May 23rd-24th

Programme

Monday 23rd

10:30-11:00 Welcome coffee

11:00-11:15 Introduction: objectives of the meeting (M.J. Goupil)

11:15-11:35 Updates on PLATO (M.J. Goupil)

11:35-13:00 **Session 1 : Stellar activity and rotation in view of exoplanet transit detection and characterization** (chair N. Lanza)

- Introduction (I. Pagano, 15 mn)
- Mitigation of stellar activity in transit search: lessons from CoRoT, Kepler, and K2 (S. Aigrain, 15 min)
- Discussion (all, 30 min)

13:00-14:30 lunch

14:30-18:10 **Session 2 : Seismic determination of stellar parameters of F-K main sequence stars** (chair: M. Cunha)

- Welcome (Cunha, M., 20 min)
- Issues coming out from the PLATO hare-and-hounds (Goupil, M.J., 15 min+5)
- PLATO hare & hounds: artificial light curve generation and mode frequency extraction (Campante, T., 10 min+5)
- Automated peak bagging: Robust first guesses from machine learning (Davies, G, .10 min+5)
- Updates on AIMS and on the SpaceInn hare-and-hounds exercise (Reese, D., 10 min+5)

- RevAMP: updated methods for automatic stellar parameter estimation (Creevey, O., 10 min+5)

16:10-16:45 coffee break

- Automatic search for optimal models using Levenberg-Marquardt algorithm (Deheuvels, S., 10 min+5)
- Optimization of Cesam2k stellar models, (Lebreton, Y., 10 min+5)
- Fitting models using epsilon matching, (Roxburgh,I., 10 min+5)
- BASTA: the BAyesian STellar Algorithm, (Silva Aguirre, V., 10 min+5)
- Acoustic glitches and stellar modelling, (Mazumdar, A., 10 min+5)
- 18:00- 18:30 All Wrap up (30 mn)

Tuesday 24th

9:30-11:00 **Session 3 : Impact of surface convection on oscillation parameters** (chair: R. Samadi)

- Plato simulator of light curves for seismic studies (Samadi, R., 10 mn)
- Surface effects from 3D models, (Sonoi, T., 10 mn)
- Modelling surface effects (Ball, W., 10 mn)
- Using calibration from 3D simulations in stellar evolution calculations (Christensen-Dalsgaard, J., 10 mn)
- Surface effects and non-adiabatic pulsations, (Houdek, G., 10 mn)
- Discussion (10mn)
- Constraints on granulation from 3D models, (Ludwig, H., 10 mn)
- Constraints on T(tau) laws from 3D models, (Kupka, F., 10 mn)
- Discussion (10mn)

11:00-11:20 coffee break (20 mn)

11:20-13:10 **Session 4 : Benchmark stars for Plato core programme and expectations from Gaia** (chair: T. Morel)

- 11:10 Introduction (Morel, 10mn+5)
- 11:25 Benchmarks for non-seismic parameters (Morel, T., 10+5 mn)
- 11:40 Benchmarks for seismic parameters (Cunha, M., 10+5 mn)
- 11:55 Benchmarks for activity and rotation (Lanza, N., 10+5 mn)
- 12:10 Interferometry and PLATO (Creevey, O, 10+5 mn)
- 12:25 Discussion (15 mn)
- 12:40 What to expect from the Gaia mission (Heiter, U., 15+5 mn)

13:10 13:30 Concluding remarks (all)

13:30 end of meeting