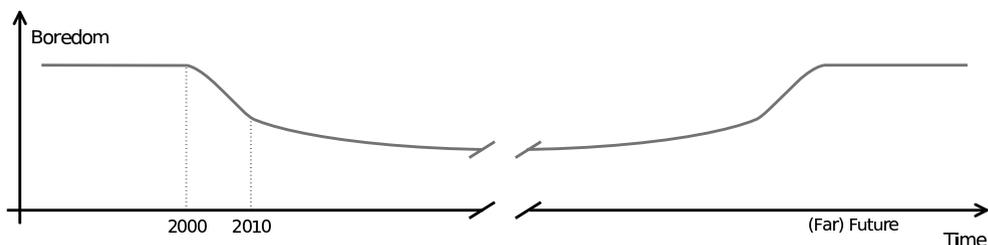


Preface



2010, the year we make second contact...

Let us consider the boredom curve in a topic, such as the discovery and characterization of transiting extrasolar planets. This curve remains flat at a very high level until first detection. At that moment, interest increases and boredom rapidly decreases as the first dozen objects are detected, with increasing difficulty. We then reach a plateau where boredom stabilizes at a very low level, bringing excitement to a maximum. This is the time of successive discoveries at an ever-increasing pace, and the rate at which boredom decreases considerably diminishes. This is the second contact of the boredom curve. It is a time when the sample of planets reaches a critical point that allows for more rigorous study. This is when detailed studies of extrasolar planets become possible and are warranted in order to advance the field. Hopefully this period will last a long time, but surely it will not last forever... At some point, be it after 1000 or 100000 transiting systems have been discovered, boredom will again set in and the community will search for excitement in other fields, probably related to atmospheric studies of Earth analogs!

This is how David Charbonneau (CfA, Harvard), one of the pioneers in observing transiting systems, opened the first scientific talk of the international conference on “Transiting planets: Detection and Dynamics”, held at the Observatoire de Haute-Provence, on August 23rd 2010. At second contact, this is where we stand in 2010, at the top of the learning curve and on the doorstep of a long series of treasures...

During a five-day meeting in warm Provence, at the exact location where many key observations for transiting extrasolar planets have taken place, 80 researchers from all fields, observers and theoreticians, gathered to share their new discoveries and enjoy fruitful discussions. Beyond detection, characterization, and interior modeling, participants focused on the new scenarios for formation, migration and interactions within a planetary system, motivated by recent discoveries of misaligned planets with respect to the equatorial plane of their parent star. Attendance was high for the entire week and participants were largely motivated. This book is a collection of almost all of their contributions to this colloquium, a state of the art presentation of transiting planets and their dynamics, at second contact, in 2010. Papers include invited reviews, regular talks and posters. They are organized in this book as during the meeting, in six thematical sections.

The Editors:
F. Bouchy, R. Díaz, and C. Moutou