San Pedro Mártir: Astronomical Site Evaluation (México, D. F. and Ensenada, B. C., México, April 3-4, 2003)
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PREFACE

The main Mexican optical observatory, the Observatorio Astronómico Nacional (OAN), was founded in 1878 at the Castillo de Chapultepec, a beautiful castle located at the hill of the Chapultepec Park in Mexico City. Five years later, the OAN was moved to Tacubaya, a hilly part at the western region of Mexico City, and remained there for nearly seventy years. Later on, in the early fifties, is was moved to the hill of Tonanzintla, in the state of Puebla, some 100 km east of Mexico City. Finally, in the mid-sixties, the National Park of San Pedro Mártir (SPM) in Baja California, was selected as its fourth, and hopefully definitive, location.

The site selection was done by the late Guillermo Haro, the discoverer of the Herbig-Haro objects, based on a limited site-survey data base that, nonetheless, indicated that SPM was a dark site with a "good" seeing, and a relatively small number of cloudy nights. The studies performed over the last three decades have confirmed that this was indeed a very good choice. SPM has an excelent atmospheric quality, and this site can now be regarded among the best astronomical sites on the surface of the Earth. This is a key aspect in the future of astronomy because the next generation of telescopes, in particular the extremely large telescopes, require a detailed evaluation of all potential sites for construction. A variety of characteristics must be carefully assessed, including fractional cloud cover, precipitable water vapor, long-term weather patterns, prevailing winds and wind flow across local topographic features, seeing (upper and ground layer turbulence profiles), geologic activity, geotechnical characteristics, and light pollution.

Motivated by the possibility that SPM could be considered as a potential host site for a large aperture telescope, the Instituto de Astronomía-UNAM decided to organize a workshop to discuss the results of a variety of site evaluation studies that have been performed in SPM, in particular, the results of the systematic work done for more than 20 years on cloud coverage and extinction, and the more recent campaigns of seeing and turbulence measurements. The meeting was held on April 3–4 2003 at the Instituto de Astronomía-UNAM jointly at Mexico City and Ensenada, B.C. The Scientific Organizing Commitee consisted of Irene Cruz-González (Chair), Remy Avila, Mauricio Tapia and José Franco, while the Local Organizing Commitee comprised Irene Cruz-González and Arturo Iriarte. Our aim was also to discuss the next steps in site testing of SPM through a revision of previous work. This volume contains the conference proceedings and the papers give a fair and detailed account of the site testing results obtained so far.

I warmly thank the enthusiasm with which all participants have done their duties, both at the presentations and in delivering their contributions in due time, and hope that this volume becomes a first solid step in planning the OAN's future. Such a future, as opposed to the expected darkness of a good astronomical site, we want it to be very bright!!

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