NEW SOLAR PHYSICS
WITH SOLAR-B MISSION
The Sixth Solar-B Science Meeting
8-11 November 2005
The Kyoto International Community House,
Kyoto, Japan

These proceedings of an international conference held 8-11 November 2005
in Kyoto provide a comprehensive overview of the science and possible
observing programs of the Solar-B mission, whose main goals are to
identify the coronal heating mechanism and to investigate
magnetohydrodynamic processes occurring in the solar atmosphere such as
magnetic reconnection.

The Solar-B satellite was successfully launched on 23 September 2006 (JST)
by ISAS/JAXA, and has been renamed Hinode (sunrise in Japanese). The
Solar-B mission is the third Japanese solar physics satellite project following
Hinotori and Yohkoh, and involves significant multilateral international
collaboration with NASA (USA), PPARC (UK), and ESA.

The aim of the conference was to discuss basic scientific objectives, possible
observing proposals and programs of the Solar-B mission. This conference
was the sixth in the series of Solar-B science meetings. The conference
consisted of 12 sessions: Instrumentation, Convection and Dynamo,
Magnetism of Quiet Sun and Active Regions, Waves and Shocks,
Chromospheric Heating, Coronal Heating, Local Helioseismology,
Emerging Flux, Reconnection, Flares, Coronal Mass Ejections, and Solar
Wind, thus covering almost all fields of solar physics. There were 19 invited
reviews, 28 contributed talks, and 73 poster papers presented on these
topics. The book is suitable for researchers and graduate students interested
in solar physics and related fields, such as astrophysics, space plasma
physics, magnetospheric physics, laboratory plasma physics, and
magnetohydrodynamics.