

1. Record Nr.	UNINA9910300428503321
Titolo	Initial Results from the Fast Imaging Solar Spectrograph (FISS) // edited by Jongchul Chae
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2015
ISBN	3-319-12123-5
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (140 p.)
Disciplina	500.5 520 530 530.8
Soggetti	Space sciences Physical measurements Measurement Spectroscopy Microscopy Space Sciences (including Extraterrestrial Physics, Space Exploration and Astronautics) Measurement Science and Instrumentation Spectroscopy and Microscopy
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"Previously published in Solar Physics Volume 288, Issue 1, 2013 and Volume 289, Issue 11, 2014".
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Fast Imaging Solar Spectrograph of the 1.6 Meter New Solar Telescope at Big Bear Solar Observatory -- FISS Observations of Vertical Motion of Plasma in Tiny Pores -- Velocities and Temperatures of an Ellerman Bomb and Its Associated Features -- Connection Between Chromospheric Events and Photospheric Dynamics -- Chromospheric Sunspot Oscillations in H and Call 8542 Å -- Doppler Shifts of the H Line and the Call 854.2 nm Line in a Quiet Region of the Sun Observed with the FISS/NST -- Temperature of Solar Prominences Obtained with the Fast Imaging Solar Spectrograph on the 1.6 m New Solar Telescope at the Big Bear Solar Observatory -- Active Region Coronal Rain Event

Observed by the Fast Imaging Solar Spectrograph on the NST.

---

Sommario/riassunto

This collection of papers describes the instrument and initial results obtained from the Fast Imaging Solar Spectrograph (FISS), one of the post-focus instruments of the 1.6 meter New Solar Telescope at the Big Bear Solar Observatory. The FISS primarily aims at investigating structures and dynamics of chromospheric features. This instrument is a dual-band Echelle spectrograph optimized for the simultaneous recording of the H I 656.3 nm band and the Ca II 854.2 nm band. The imaging is done with the fast raster scan realized by the linear motion of a two-mirror scanner, and its quality is determined by the performance of the adaptive optics of the telescope. These papers illustrate the capability of the early FISS observations in the study of chromospheric features. Since the imaging quality has been improved a lot with the advance of the adaptive optics, one can obtain much better data with the current FISS observations. This volume is aimed at graduate students and researchers working in the field of solar physics and space sciences. Originally published in Solar Physics, Vol. 288, Issue 1, 2013, and Vol. 289, Issue 11, 2014.

---