## TABLE OF CONTENTS

*Foreword* 8

*List of Participants* 10

**Session 1: THEMIS**

B.F. Gelly  
*THEMIS: the 2006-2012 perspective* 13

V. Bommier  
*Some THEMIS tip-tilt images* 23

A. López Ariste  
*THEMIS observational hits in 2006* 27

**Session 2: The quiet Sun**

G. Tsiropoula and K. Tziotziou  
*The fine-scale structure of the quiet solar chromosphere* 32

M. Bianda, R. Ramelli, and J.O. Stenflo  
*Variation of the second solar spectrum with the solar cycle* 38

A. Asensio Ramos and J. Trujillo Bueno  
*THEMIS observations of the Hanle effect in C\textsubscript{2} lines* 42

C. Grec, C. Aime, M. Faurobert, G. Ricort, and F. Paletou  
*Contrast inversion in the 557.6 nm line detected with differential speckle interferometry* 48

J.C. Ramírez Vélez  
*Magnetic strength analysis in the quiet Sun regions using the Mn\textsubscript{i} line at 553 nm* 54
M. J. Martínez González
*Internetwork magnetic fields observed in the visible*  
59

V. Bommier, G. Molodij, and N. Meunier
*The granular magnetic field as observed with THEMIS*  
65

R. Muller, A. Hanslmeier, and M. Saldaña-Muñoz
*Space and time variation of the solar granulation*  
71

**Session 3: The active Sun and the network**

Z. Xu and J.C. Hénoux
*Multi-wavelength analysis of the impact polarization of 2001 June 15th solar flare*  
77

J. Štěpán
*Polarization diagnostics of proton beams in solar flares*  
83

J. Arnaud, S.V. Berdyugina, D.M. Fluri, and N. Afram
*Spectro-polarimetry of a sunspot simultaneously in atomic and molecular lines*  
89

*Magnetic flux tubes observed with THEMIS/MSDP*  
92

K. Tziotziou, G. Tsiropoula, N. Mein, and P. Mein
*Dual-line analysis of sunspot oscillations*  
98

**Session 4: Filaments, prominences and corona**

J. Arnaud, M. Faurobert, and E. Fossat
*Dome C: An exceptional site for solar observations*  
105

G. Stellmacher, E. Wiehr, and J. Hirzberger
*Two-dimensional imaging of the He D₂/Hβ emission ratio in quiescent solar prominences*  
108

S. Rondi, Th. Roudier, G. Molodij, V. Bommier, J.M. Malherbe, B. Schmieder, N. Meunier, M. Rieutord, and F. Beigbeder
*Photospheric flows around a quiescent filament and CALAS first results*  
114

M. Kramar and B. Inhester
*Inversion of coronal Zeeman and Hanle observations to reconstruct the coronal magnetic field*  
120

**Session 5: Theory, extrapolation and simulation**

S. Régnier
*Nonlinear force-free field extrapolation: numerical methods and applications*  
126

P. Démoulin and E. Pariat
*Computing magnetic energy and helicity fluxes from series of magnetograms*  
136
H. Frisch, M. Sampoorna, and K. N. Nagendra
Turbulent magnetic field averages for the Zeeman effect  

Session 6: Polarimetric analysis & inversion methods: available tools
B. Lites, R. Casini, J. Garcia, H. Socas-Navarro
A suite of community tools for spectro-polarimetric analysis  
A. Sainz Dalda and A. López Ariste
Using reduction and inversion tools for THEMIS-MTR data: chromospheric reversals of a moving magnetic feature and an ephemeral region  
P. Mein, N. Mein, and V. Bommier
Fast vector magnetic maps with imaging spectroscopy  
E. Khomenko and M. Collados
Magnetic field inversions from Stokes profiles generated by MHD simulations  

Session 7: Openings on the future
N. Meunier, M. Lafon, P. Maeght, F. Grimaud, and Th. Roudier
BASS2000-Tarbes: current status and THEMIS data processing  
J.O. Stenflo
Solar polarimetry with ZIMPOL  
B. Schmieder
New results and future perspectives of THEMIS  

POSTERS
S. Sahal-Bréchet, M. Derouich, V. Bommier, and P. S. Barklem
Multipole rates for atomic polarization studies: the case of complex atoms in non-spherically symmetric states colliding with atomic hydrogen  
J.-M. Malherbe, Th. Roudier, J. Moity, P. Mein, J. Arnaud, and R. Muller
Spectro polarimetry with liquid crystals