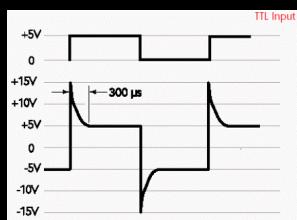


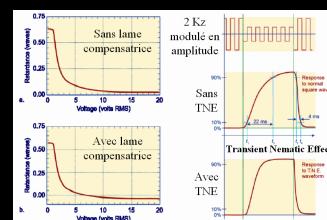
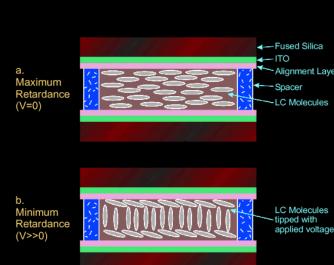


Spectro Polarimetry with Liquid Crystals at Pic du Midi

J.-M. Malherbe, J. Moity, Th. Roudier, R. Muller, J. Arnaud, P. Mein, Ch. Coutard



Polarimeter 1 (2003): Ferroelectric
Advantages: fast (10 KHz)
Disadvantages: chromatism, fringes

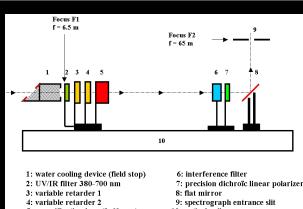


Polarimeter 2 (2004): Nematic
Disadvantages: slow (40 Hz)

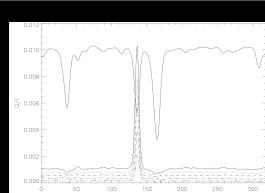
Advantages: variable retardance, good optical quality



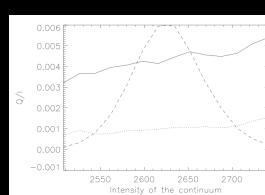
$$S = (1/2) (I + Q \cos\delta_2 + \sin\delta_2 (U \sin\delta_1 - V \cos\delta_1))$$



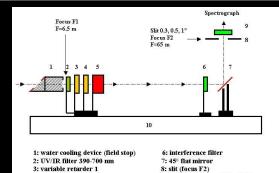
Polarimeter 2 (2004) in
spectroscopic mode with 2
Liquid Crystal Variable
Retarders



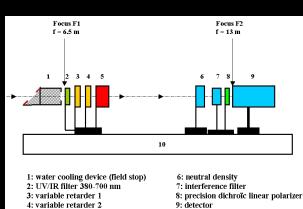
Polarization Q/I
of SrI 460.7 nm
at 10'', 20'',
40'', 80'', 160''



Polarization Q/I
of SrI 460.7 nm
at 40'' as a
function of
intensity

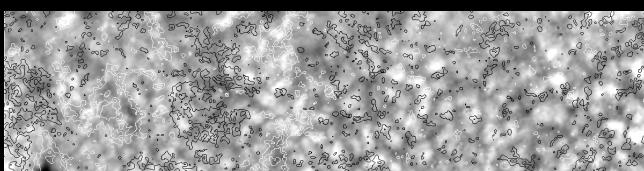
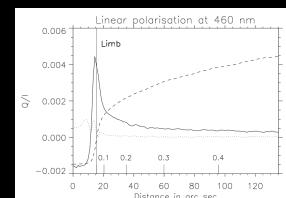
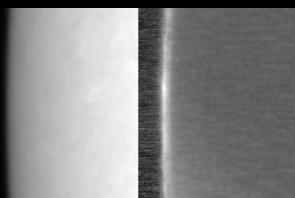


Future polarimeter 3
(2007) in
spectroscopic mode
with 2 Liquid Crystal
Variable Retarders
and a beam splitter
shifter (beam
exchange available)

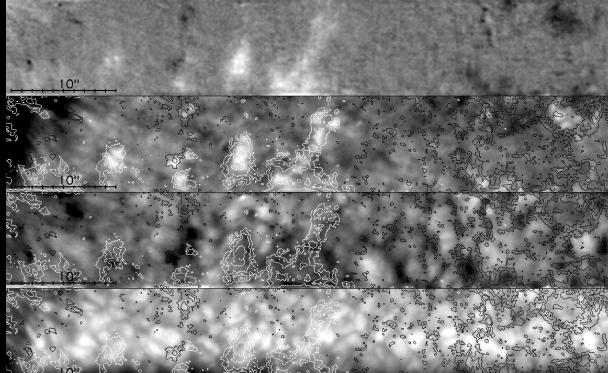


Polarimeter 2 (2004) in imagery mode with 2
Liquid Crystal Variable Retarders for the
measure of the continuum polarization

Imagery of I and Q/I in SrI 460.7 nm →



$B// \rightarrow$
I core
+ contours of
 $B// \rightarrow$

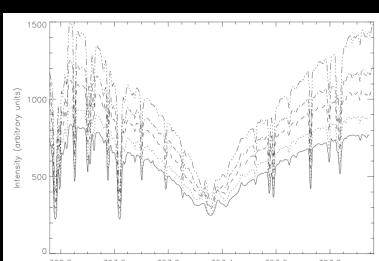
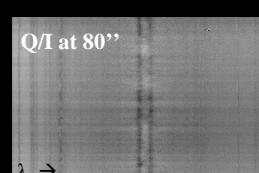
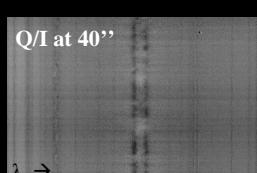


Stokes V polarimetry with
the MSDP system in NaD1
589.6 nm and Polarimeter 1
(Ferroelectric, 2003)

Continuum and isocontours
of $B//$

Stokes V polarimetry
with the MSDP
system in NaD1
589.6 nm and
Polarimeter 2 (2004)

$V// +$ contours
of $B// \rightarrow$
I continuum +
contours $B// \rightarrow$



Center to limb variation of the linear polarization of CaII K 393.3 nm (integration along the slit)

Slit 0.6'' x 120'' exposure time 3 s

Limb distance 5'', 10'', 20'', 40'', 80''

← Intensity profiles

Q/I profiles →

