S L: spectropolarimetry in solar ares

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Spectropolarimetry has still much to offer in the study of solar flares, this is a possibility we are addressing with our IRSO flare observation program. Specifically, we are running spectropolarimetric observations whose range includes the He I D line, using the slit-spectrograph setup and occasionally the Fabry-Prot.
Thanks to the high precision provided by the ZI PO polarimeter, we were able to clearly detect linear polarization in the He I D line during a solar flare event. Our analysis strongly suggests that this polarization originates from anisotropy in the radiation field. Although not yet observed, we think that He I D line could be used for the investigation of flare-accelerated particles and their impact in the lower atmosphere.