

## Snapshot-mode imaging spectropolarimetry

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Imaging spectroscopy and imaging polarimetry are typically implemented with scanning instruments, requiring longer acquisition times, reduced light efficiency, and mechanical instability due to moving parts. Snapshot implementations overcome these limitations by making use of more complex optical layouts and computational sensing techniques, opening up the possibility of measuring the spectrally-resolved polarization of dynamic scenes.

We show how to construct a snapshot imaging polarimeter based on the combination of computer tomographic imaging spectroscopy (CTIS) and channeled spectropolarimetry (CHSP), and discuss the resolving power and tradeoffs of the instrument through experimental results. The system layout and hardware for this configuration is shown in the figures below. Finally, we also discuss alternative configurations that can be used for improved performance and resolution.

