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**Analysis of time-resolved tomographic PIV data of a transitional jet** PETER SCHMID, LadHyX, Ecole Polytechnique, France, DANIELE VIOLATO, FULVIO SCARANO, TU Delft, The Netherlands — Time-resolved tomographic particle image velocimetry (TR-TOMO-PIV) data of a transitional water jet at a Reynolds number of  $Re = 1500$  have been obtained capturing all relevant spatial and temporal scales. These flow fields have then been processed by the dynamic mode decomposition (DMD) which extracts frequencies and associated coherent structures that constitute a significant part of the overall dynamics. Three data sets, covering the primary instability near the nozzle, the rise of secondary features further downstream and the breakdown into turbulence, have been analyzed, and frequency distributions and principal flow structures will be presented. Besides a temporal analysis of the data, a spatial analysis (in the axial direction) will be performed and compared to the findings from the temporal framework.

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