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The magnetopause and boundary layers viewed by THEMIS

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The magnetopause and its associated boundary layers are the non-static outer regions of the magnetosphere. Temporal variations of the magnetosheath flow velocity, density and pressure cause a continuous change of position and shape of the magnetopause due to changing pressure balance or Kelvin-Helmholtz instability. Analysing the magnetopause dynamics thus requires a spatio-temporal analysis. The five THEMIS spacecraft, aligned as pearls on a radial string, traversed the afternoon magnetopause region many times in this first months after the THEMIS launch in March 2007. First results will be presented.