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Cassini in Titan's tail: CAPS observations of plasma escape

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We present observations of CAPS electron and ion spectra during Titan distant tail crossings by the Cassini spacecraft. In common with closer tail encounters, we identify ionospheric plasma in the tail. Some of the electron spectra indicate a direct magnetic connection to Titan's dayside ionosphere due to the presence of ionospheric photoelectrons. Ion observations reveal heavy and light ion populations streaming into the tail. Using the distant tail encounters T9, T75 and T63, we estimate total plasma loss rates from Titan via this process.