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# The global plasma environment of Titan as observed by Cassini Plasma Spectrometer during the first two close encounters with Titan

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The Cassini spacecraft flew by Titan on October 26, 2004 and December 13, 2004, in both cases entered the ionosphere of Titan, and explored its plasma environment. Using observations from the Cassini Plasma Spectrometer (CAPS) and the Cassini magnetometer along the inbound legs of both flybys, we examine Titan's global plasma environment. On both occasions CAPS detected plasma populations different from the Kronian magnetosphere at about 1-1.5 RSaturn from the moon. Closer to Titan CAPS observed drifting ion ring distributions originating from Titan and the ram flows significantly decelerated around the moon due to mass loading processes. Near the moon, above the ionosphere, very cold plasma was dominant. Comparison of the new data to those of Voyager 1, and to the plasma environment of other non-magnetic planets will be also presented.