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Plasma Condensations in Active Region Loops

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Simultaneous observations with CDS and SUMER on SOHO, and with TRACE, are used to investigate plasma condensation processes in active region loops observed at the solar limb. At transition region temperatures, most loop structures show quasi periodic intensity enhancements moving down the legs of loops to the surface of the sun. These intensity enhancements are probably the result of plasma condensation: hot coronal plasma is cooled to transition region or even chromospheric temperatures and slide down the loop legs at speeds up to 100 km/s. At coronal temperatures the observed loops are less variable and moving intensity enhancements are seen less frequently than in the transition region.