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EX/P3-25: Survey of Density Modulation Experiments on the HT-7 Tokamak

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The particle diffusion coefficient and the convection velocity have been studied by means of the density modulation using pulsed deuterium gas puffing on the HT-7 tokamak. It was observed in AC plasmas that the particle transport coefficient and confinement time of the positive current plasma is different from that of the negative current plasma (Gao X et al 2008 Nucl. Fusion 48 035009) on HT-7 tokamak. New experimental result improved our understanding in AC plasma operation on HT-7 tokamak. It was found that the particle confinement time becomes much higher when the directions of plasma current and toroidal field are uniform. Recently, the density modulation experiments are carried out with advanced liquid lithium limiter on HT-7 tokamak. The interesting results are compared and discussed in detail with previous results under the graphite limiter on HT-7 tokamak.

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