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The behavior of $H\alpha$ profile after supersonic molecular beam injection (SMBI) was measured in Heliotron J. Comparison between SMBI and gas puffing was carried out under the same ejected amount by using a shutter shown in (a). (b) and (c) show the time evolutions. The radial profiles are shown in (d). In SMBI case, the beam penetrates toward the magnetic axis, and the intensity outside the torus is higher than that inside the torus. The behavior of electron density profile was also measured using a newly developed microwave AM reflectometer. (Kiyofumi MUKAI *et al.*, Plasma and Fusion Research Vol. 6, 1402111 (2011) <http://www.jspf.or.jp/PFR/>)