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Magnetic field strength at the center of vacuum vessel in NAGDIS-II (Nagoya University). In order to form the magnetic field expansion and contraction in axial direction, it is possible to change the currents for 12 magnetic coils in upstream and 8 coils in downstream sides, respectively. The effects of expanding and contracting magnetic field configurations on the detached plasma formation were investigated by using electrostatic probe, target plate and optical emission spectroscopy. (Yuki HAYASHI, *et al.*, Plasma and Fusion Research Vol. 11, 1202005 (2016) <http://www.jspf.or.jp/PFR/>)