A new neutral particle analyzer diagnostic and its first commissioning on HL-2A[a)]

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A new neutral particle analyzer diagnostic has been developed for HuanLiuqi-2A (commonly referred to as HL-2A), which can provide the neutral particle flux measurement along 11 separate sightlines, simultaneously, within a wider energy range (1—70 keV). It is an electrostatic type analyzer with a removable pinhole and special-shape condenser. The energy analysis can be flexibly achieved by controlling a preset stepwise high voltage on the condenser. It is compact and its field of view covers HL-2A cross section from −33 cm to 33 cm without "cross-talk." The energy spectra and ion temperature profile have been obtained during its commissioning. © *2012 American Institute of Physics*.
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