

Abstract Submitted  
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**Local Observations of Energetic Particle Modes and Fast Ion Responses in the Compact Helical System**<sup>1</sup> KENICHI NAGAOKA, MITSUTAKA ISOBE, KAZUO TOI, KAZUYUKI GOTO, YASUSHI TODO, MASAKI OSAKABE, KIYOMASA WATANABE, YASUHIKO TAKEIRI, National Institute for Fusion Science, CHS TEAM — MHD instabilities induced by energetic ions are crucial issues in burning plasmas, and loss mechanisms of energetic ions have been strongly studied. In this research, we have applied a directional probe method to plasmas in CHS for local measurements of energetic ion responses to EPMS, and observed two kinds of responses. Moreover, magnetic fluctuations of EPMS were simultaneously measured at almost the same position with the energetic particle measurements. The phase relation between them was experimentally investigated. Temporal change of the spatial structure of EPM was also observed during the frequency chirping-down.

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