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Alfvénic Accelerated Electrons and Auroral Kilometric Radiation Observed by the FAST satellite LUN MA, YI-JIUN SU, SAMUEL JONES, R.E. ERGUN, University of Texas at Arlington — Evidence of the coexistence of Alfvén waves and Auroral Kilometric Radiation (AKR) will be presented. Previous studies suggested two types of electron maser instabilities to be the generation mechanism of AKR: one is the loss cone maser; the other is the "shell" maser. The ratio of plasma frequency to electron cyclotron frequency should be small in order to trigger the instability predicted by the weakly relativistic electron cyclotron maser theory. One case has been found where narrow band emissions are associated with multiple shell electron distributions in a dynamic Alfvénic acceleration region. More observational evidences will be presented.

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