

# **The mechanism of the backward propagating Langmuir waves**

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The conversion of Langmuir waves into electromagnetic radiations is an important mechanism of solar type III bursts. Langmuir waves can be easily excited by electron beam instability. And they can be converted into backward propagating Langmuir waves by waves-waves interaction. Generally, the backward propagating Langmuir waves are very important. But it is not sure that they converted by the Langmuir waves or the electron beams. In this work we study the mechanism of the backward propagating Langmuir waves by particle in cell simulations and analytical.