

# Two Component Long Wave-Short Wave Resonant Interaction in a Madelung Fluid Description\*

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## Abstract

The interaction between two bright solitons (short waves) and a dark one (long wave) is discussed and in the resonance condition, using a multiple scales analysis, a two component Zakharov-Yajima-Oikawa system is obtained. A Madelung fluid description is used to discuss this system and several solutions are presented.

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