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# Evidence of resonant mode coupling in the hot B subdwarf star KIC10139564

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## Abstract

We present the results of period and amplitude modulations in hot B subdwarf star KIC10139564 based on the 38-month exquisite quality data observed by Kepler spacecraft. Among the 12 frequencies concerned, including three multiplets and one independent frequency, the primary triplet at 5760  $\mu\text{Hz}$  show evident modulations of period and amplitude. The rest two multiplets are showing the modulations as the primary triplet but in a very small range. The frequency modulations are beyond our current pulsating theory and could be the evidence of resonant mode coupling. More theoretical work is needed to investigate further the relevance of this mechanism.

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