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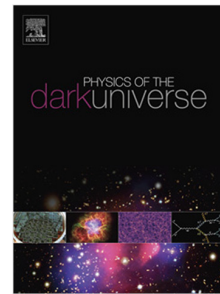
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Is it possible to obtain cosmic accelerated expansion through energy transfer between different energy densities?

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The equation of state of an energy density may be significantly modified by coupling it to another energy density. In the light of this observation we check the possibility of producing cosmic accelerated expansion in this way. In particular we consider the case where matter is converted to radiation (or vice versa by particle physics processes). We find that cosmic accelerated expansion can be obtained in this way only if an intermediate state with negative equation of state forms during the conversion.

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