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Bianchi type-I cosmological model filled with viscous fluid in a modified Brans-Dicke cosmology. (English) [Zbl 1259.83017](#)

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Summary: Adding the cosmological term, which is assumed to be variable in Brans-Dicke theory we have discussed about a Bianchi type-I cosmological model filled with viscous fluid with free gravitational field of Petrov type-D. The effect of viscosity on various kinematical parameters has been discussed. Finally, this model has been transformed to the original form [*C. Brans* and *R. H. Dicke*, *Phys. Rev.* (2) 124, 925–935 (1961; [Zbl 0103.21402](#))] of Brans-Dicke theory including a variable cosmological term.

MSC:

- [83D05](#) Relativistic gravitational theories other than Einstein's, including asymmetric field theories
- [83F05](#) Cosmology
- [83C55](#) Macroscopic interaction of the gravitational field with matter (hydrodynamics, etc.)
- [83C20](#) Classes of solutions; algebraically special solutions, metrics with symmetries for problems in general relativity and gravitational theory

Cited in 1 Document

Keywords:

[Bianchi type-I](#); [viscous fluid](#); [Brans-Dicke theory](#); [Petrov type-D](#); [cosmological model](#)

Full Text: [DOI](#)

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