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Dynamic Singularities in Porous and Granular Materials

The paper concerns the problem of propagation conditions for weak and strong discontinuities in multicomponent systems with one solid component. The described class is based on a continuum thermodynamical approach and yields hyperbolic systems of field equations. It is shown that weak discontinuity waves contain additional modes of propagation with a strong attenuation. As well as that a nonlinearity of some constitutive relations - for instance, for a fluid component - yields the creation of strong discontinuity wave after a finite time.

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– On the Time of Existence of Weak Discontinuity Waves in Poroelastic Materials, *Arch. Mech.* **50**, (1998).