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| | **authors** | • Morando, Alessandro<br>• Trakhinin, Yuri<br>• Trebeschi, Paola | **authors** | • Alessandro Morando<br>• Yuri Trakhinin<br>• Paola Trebeschi | DUPLICATES | 1075 |
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| | **abstract** | We study the free boundary problem for contact discontinuities in ideal compressible magnetohydrodynamics (MHD). They are characteristic discontinuities with no flow across the discontinuity for which the pressure, the magnetic field and the velocity are continuous whereas the density and the entropy may have a jump. Under the Rayleigh-Taylor sign condition $[\partial p/\partial N]<0$ on the jump of the normal derivative of the pressure satisfied at each point of the unperturbed contact discontinuity, we prove the well-posedness in Sobolev spaces of the linearized problem for 2D planar MHD flows.Comment: 40 page | **abstract** | We study the free boundary problem for contact discontinuities in ideal compressible magnetohydrodynamics (MHD). They are characteristic discontinuities with no flow across the discontinuity for which the pressure, the magnetic field and the velocity are continuous whereas the density and the entropy may have a jump. Under the Rayleigh-Taylor sign condition $[\partial p/\partial N]<0$ on the jump of the normal derivative of the pressure satisfied at each point of the unperturbed contact discontinuity, we prove the well-posedness in Sobolev spaces of the linearized problem for 2D planar MHD flows. | | |
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