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ON A HYPERBOLIC RELAXATION CAGINALP PHASE-FIELD SYSTEM BASED ON THE MAXWELL-CATTANEO LAW

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Abstract. In this paper, we are interested in the study of the asymptotic behavior, in terms of finite-dimensional attractors, of a reformulation of the hyperbolic relaxation Caginalp phase-field system based on the Maxwell-Cattaneo law. Here, instead of the equation for the relative temperature (or the thermal displacement variable), we consider the equation for the enthalpy. In particular, we prove the existence of exponential attractors and, thus, of finite-dimensional global attractors.

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