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Pedro A Guil-Asensio (paguil@um.es), Departamento de Matematicas, Universidad de Murcia, Murcia, Spain, **Ivo Herzog** (herzog.23@osu.edu), Department of Mathematics, Lima, OH 45804, and **Blas Torrecillas*** (btorrecci@ual.es), Departamento de Algebra y Analisis, Universidad de Almeria, 04071 Almeria, Spain. *Phantom maps and pure-injectivity.*

We study the ideal of all phantom maps in a category of modules and the existence of covers of modules by these morphisms. In this study, we introduce a new interesting class of modules which generalizes the class of pure-injective modules and that we call ϕ -pure-injective modules. This class coincide with cotorsion modules in the case of Abelian groups and with pure-injective modules in the case of Quasi-Frobenius rings. (Received January 19, 2010)