Internally injective modules in higher toposes

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By defining Ext groups over a ring in homotopy type theory, we obtain a notion of Ext sheaves of modules in a higher topos. Over an ordinary (1-)site, these recover the classical notion of sheaf Ext studied by algebraic geometers. The proof of this uses that our Ext groups can be computed in terms of resolutions (when they exist), and relies on the fact that injectivity of modules in HoTT corresponds to internal injectivity in these models. However, over untruncated sites this characterization is more subtle. I will present our construction of Ext groups in HoTT, along with the relation to sheaf Ext over 1-sites. The proof fails to generalise to arbitrary sites for an interesting reason, which I will explain. This work joint with Dan Christensen.