1078-14-415 **Colin J Ingalls***, cingalls@unb.ca, and **Alexander Kuznetsov**. *Double covers of* $\mathbb{P}^3$ *and Reye congruences.*

We consider the class of singular double coverings $X \to \mathbb{P}^3$ ramified in the degeneration locus D of a family of 2-dimensional quadrics. These are precisely the quartic double solids constructed by Artin and Mumford as examples of unirational but nonrational conic bundles. With such quartic surface D one can associate an Enriques surface S which is the factor of the blowup of D by a natural involution acting without fixed points (such Enriques surfaces are known as nodal Enriques surfaces or Reye congruences). We show that the nontrivial part of the derived category of coherent sheaves on this Enriques surface S is equivalent to the nontrivial part of the derived category of a minimal resolution of singularities of X. (Received December 14, 2011)