1012-83-75 Cumrun Vafa\* (vafa@physics.harvard.edu), Department of Physics, Harvard University, Cambridge, MI 02138. Black Holes and Topological Strings.

We discuss the connection between black hole entropy and topological strings in 4 and 5 dimensions. This leads to a whole host of mathematical conjectures that if proven would have far reaching consequences for enumeration of holomorphic cycles in Calabi-Yau threefolds. (Received September 06, 2005)