1099-35-333 **Svetlana Roudenko***, Department of Mathematics, Washington, DC 20052. *Contracting sphere blow-up dynamics in the focusing 3d cubic NLS equation.*

We rigorously construct radial H^1 solutions to the 3d cubic focusing NLS equation that blow-up along a contracting sphere. With blow-up time set to $t = 0$, the solutions concentrate on a sphere at radius $\sim t^{1/3}$ but focus towards this sphere at the faster rate $\sim t^{2/3}$. Such blow-up solutions can have an arbitrarily large mass. This is a joint work with Justin Holmer and Galina Perelman. Such dynamics were originally proposed heuristically by Degtyarev-Zakharov-Rudakov in 1975. (Received February 11, 2014)