1046-42-743 **Emanuel Carneiro*** (ecarneiro@math.utexas.edu), University of Texas at Austin, Department of Mathematics, Austin, TX. *A sharp inequality for the Stricharz norm.* Preliminary report.

Let $u : \mathbb{R} \times \mathbb{R}^n \to \mathbb{C}$ be the solution of the linear Schrodinger equation

$$\begin{cases} iu_t + \Delta u &= 0 \\ u(0,x) &= f(x). \end{cases}$$

We obtain an a priori sharp inequality for the Strichartz norm $\|u(t,x)\|_{L_t^{2k}L_x^{2k}(\mathbb{R}\times\mathbb{R}^n)}$, where $k \in \mathbb{Z}$, $k \geq 2$ and $(n,k) \neq (1,2)$, that admits only gaussian maximizers. As corollaries we present sharp forms of the classical Stricharz inequalities in low dimensions (works of Foschi and Hundertmark-Zharnitsky) and also sharp forms of some Stricharz-Sobolev inequalities. (Received September 10, 2008)