1107-13-442 **Louiza Fouli*** (lfouli@math.nmsu.edu), Department of Mathematical Sciences, New Mexico State University, Las Cruces, NM 88003, and **Paolo Mantero** and **Yu Xie**. *Conjectures on Symbolic Powers.* Preliminary report.

Given a finite set of points X in the projective space $\mathbb{P}_k^N$, for some N, it is natural to ask what is the least degree, α_m, of a hypersurface $F \neq 0$ passing through all the points with a given multiplicity m. Chudnovksy conjectured in 1981 that $\frac{\alpha_m}{m} \geq \frac{\alpha(X)+N-1}{N}$, where $\alpha(X)$ is the minimum degree of a hypersurface passing through every point in X. He established his conjecture in the case $N = 2$, but the conjecture is still open in full generality. We will discuss known results and some further progress towards this conjecture. This is joint work with Paolo Mantero and Yu Xie. (Received January 20, 2015)