Charge-Asymmetry Dependence of Proton Elliptic Flow in 200 GeV Au+Au Collisions\textsuperscript{1} RACHEL SMITH, UCLA/UIUC, STAR COLLABORATION — The chiral magnetic wave (CMW) is predicted to manifest a finite electric quadrupole moment in the quark-gluon plasma produced in high-energy heavy-ion collisions \cite{Burnier2011}. This quadrupole moment generates a divergence in the azimuthal anisotropy ($v_2$) of positively and negatively charged particles such that $v_2(+) < v_2(-)$. This effect is proportional to the apparent charge asymmetry ($A_{ch}$) of particles in the same rapidity window. The $A_{ch}$ dependence of $v_2$ has already been observed in the cases of charged pions and kaons \cite{Adamczyk2015, Shou2014}. We present preliminary STAR measurements of $v_2$ for protons and anti-protons as a function of $A_{ch}$ from $\sqrt{s_{NN}} = 200$ GeV Au+Au collisions for different centrality classes. The results are then compared with the previously reported results of pions and kaons. \cite{Burnier2011, Adamczyk2015, Shou2014}.

\textsuperscript{1}For the STAR Collaboration