1127-35-195 **Burak Erdogan**, **William Green** and **Ebru Toprak*** (toprak2@illinois.edu). *Dispersive estimate for Dirac operators in dimension three with obstruction at threshold energies.*

We investigate $L^1 \to L^\infty$ dispersive estimates for the three dimensional Dirac operator with potential; $H = -i\alpha \cdot \nabla + m\beta + V(x)$, where $\alpha = (\alpha_1, \alpha_2, \alpha_3)$ and β are Pauli spin matrices. We also classify the structure of obstructions at the thresholds of the essential spectrum as being composed of a two dimensional space of resonances and finitely many eigenfunctions. We show that the following low-energy estimate

$$\left\| e^{-itH} P_{ac}(H)\chi(H) - \langle t \rangle^{-\frac{1}{2}} K_t \right\|_{L^1 \to L^\infty} \lesssim \langle t \rangle^{-\frac{3}{2}}$$

holds where K_t is time dependent operator with finite rank and satisfying $\sup_t \|K_t\|_{L^1 \to L^\infty} \lesssim 1$. (Received February 05, 2017)