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**Prayat Poudel\*** (p.prayat@gmail.com), 6900 SW 44th St, Unit 214, Miami, FL 33155. *Lescop's Invariant and Gauge Theory.*

Taubes proved that the Casson invariant of an integral homology 3-sphere equals half the Euler characteristic of its instanton Floer homology. We extend this result to all closed oriented 3-manifolds with positive first Betti number by establishing a similar relationship between the Lescop invariant of the manifold and its instanton Floer homology. The proof uses surgery techniques. (Received November 13, 2013)