Questions surrounding the measured value of the Higgs mass as well as astrophysical evidence for Dark Matter suggest that new particles and/or interactions are awaiting discovery. With the significant increase in collision energy and the large datasets of Run 2, it may be possible that data from the Large Hadron Collider will provide evidence for the existence of partners to the top quark. I will discuss the ongoing searches for Supersymmetric partners of the top quark, called top squarks or "stops", and how their discovery could shed light onto the nature of the lightness of the Higgs mass and Dark Matter. My talk will focus on the detector upgrades that laid the foundation for exploiting the incoming data, the prospects for the full Run 2 dataset, and possible future directions in our search for physics beyond the Standard Model.