Forecasting International Space Station Transits of the Sun

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As the ISS orbits the Earth, when it passes between an Earth borne observer and the Sun it performs a transit. Previously no model existed for extremely precise forecasting of such Transits. This project created such a model, specifically engineered for the telescope on top the school, SAMD. The model takes in the shadow effects of the Alps around the school, the exact elevation, and the exact position of the observer when making a forecast. Back testing with previous data, the model was able to accurately predict the ISS transit of the Sun during the Total Eclipse of August 2017, a ‘Fly-by’ in Davos on December 7, 2017, the Solar Transit on December 27, 2017 in Davos, and in its current state has not once returned a false positive.

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