Mining Solar Data: the experience with SDO, Hinode, and TRACE

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Space-based telescopes that observe the Sun collect close to a terabyte of data each day. The magnitude of these observatory archives finding data of relevance to particular research problems, efficient and fast access to the stored data, and the analysis of the observations. In this talk I will describe experiences with the 'live' SDO and Hinode archives as well with the archive of the recently retired TRACE mission that - as a precursor to SDO's AIA - offers a 12-year extension of the coverage by AIA of solar coronal activity. Topics include data access, summaries, meta-data extraction, autonomous data monitoring and mining, and remote access and analysis.