



Physics Mining of Spacecraft Data

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The prevalent approach to analysis of spacecraft data is based on visual inspection of data. As a result, the vast majority of the collected data from various missions has gone unexplored. The computer aided algorithmic approach to data analysis as facilitated through data mining techniques are essential for analysis of large data sets and enable discovery of hidden information and patterns in the data. Our goal has been to make such tools accessible to non-experts and remove it from gee-whiz domain to a practical tool that will become part of the standard arsenal of data analysis. To this end, we have developed an automated data mining technique called MineTool. Its first deployment to analysis of Cluster has been very successful (Karimabadi et al., JGR, 114, A06216, 2009) and this tool is gaining adoption among experimentalists. In this talk, we will provide an overview of this tool, illustrate its use through examples, and discuss future directions of research.