

Total Reflection X-ray Fluorescence and the NASA Genesis Mission

ABSTRACT

We are currently investigating the efficiency of different cleaning methods on NASA Genesis samples. The NASA Genesis mission <http://genesismission.jpl.nasa.gov> was flown between 2001 and 2004 and returned solar wind material embedded within high purity collectors to Earth. Upon return the spacecraft crashed into the Utah desert shattering the collectors into small fragments and exposing them to contamination. The efficient removal of these contamination is necessary to obtain information of the in space implanted solar wind. In this presentation I will discuss the use of Total Reflection X-ray Fluorescence for trace elemental analysis.

BIOSKETCH



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Martina Schmeling received her PhD in chemistry at the University of Dortmund in Germany and is currently associate professor of chemistry at Loyola University Chicago. Her research interests are the analysis of metals in various matrices by X-ray fluorescence methods with specific interest in environmental and material sciences. More recently she became involved in the NASA Genesis mission, which aids in understanding the formation of the solar system by analyzing material brought back from Space. Dr. Schmeling has authored and co-authored more than 50 publications and mentored a number of graduate and undergraduate students.