

**1st GRUAN Implementation-Coordination Meeting (ICM-1)**  
Norman, Oklahoma, USA  
2-4 March 2009

Item 3

## **How should we make GRUAN measurements? An Overview**

*(Submitted by D. Sisterson)*

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### **Summary and Purpose of Document**

This document contains an overview of session 3, whose goal is to find consensus on the identification of a process or processes that will assess and ensure the quality of GRUAN observations and metadata that can be practically achieved by an international network at an efficient operational level.

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## GRUAN Session 3

Chair: Douglas Sisterson

Session Title: How should we actually make GRUAN measurements?

This session is intended to understand what measurements must be made (and preserved) in order to assess the quality of the primary GRUAN observations: something we generally refer to as metadata. Certainly, all GRUAN observations need to be traceable to a single reference standard. While we can initially calibrate instruments systems and provide for a schedule of calibration checks, there are some instrument systems that may require additional and even independent measurements to validate their observations. An additional complexity of metadata is the cost of providing, archiving, and communicating such information to users that can be achieved at the realistic operational level for a large, international program with world-wide multi-distributed facilities and challenging budget constraints. This session is about the necessary metadata to ensure observations, not instrumentation.

The first presentation is by the Lead Center, and it will outline their perspective of what a GRUAN observation may consist of, especially the minimum metadata needed to assure the quality of the observations. The presentations that follow provide the processes that other networks or systems experts use to provide instrument system calibrations, calibration checks, cross-checking observations against other measurements, and the value of instrument/measurement expert teams.

The intent of this session is to essentially come away (have consensus) with the identification of a process or processes that will assess and ensure the quality of GRUAN observations and metadata that can be practically achieved by an international network at an efficient operational level.