



NASA Electronic Parts and Packaging (NEPP) Program  
**Reliability of Cu-Based Microelectronic  
Metallization Systems**



**Task Manager: Dr. Rosa Leon (JPL)**

## **Objective**

- **Assess failure mechanisms of copper-based metallization and low-permittivity dielectric intra-chip interconnect systems**
- **Investigate failure mechanisms in Cu-based metallization systems**
- **Understand reliability issues of Cu metallization relevant to space applications**

## **Participating Centers**

- **Ashok Shama (GSFC)**

## **Deliverables**

- **Report on Industrial applications and expected failure mechanisms or Cu/low-k interconnect systems**
- **Reports based on experimental results**
- **Technical papers, publications and/or conference presentations**
- **Provide recommendations for use of Cu interconnects in space applications**