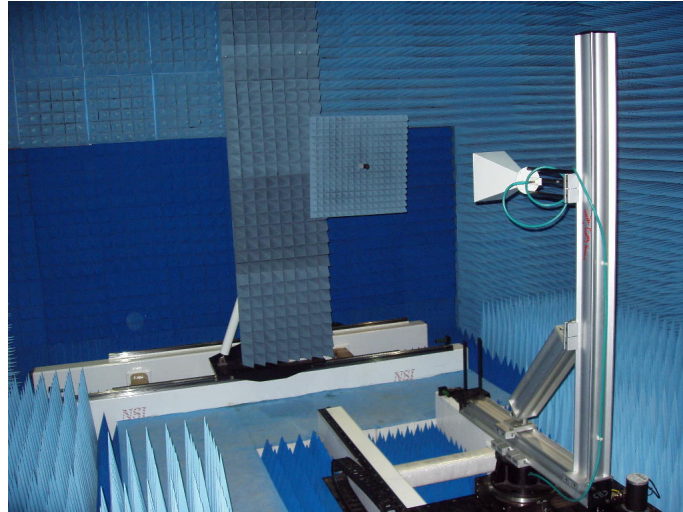


### NIST 4-Term Range Assessment



#### DESCRIPTION

Our NIST 4 term range assessment will provide you a detailed evaluation of your test range performance. Error budgets can be compiled for antenna gain, side lobe level (SLL) at different levels and cross-polarization accuracy. Each error budget is only valid for a particular antenna at a particular frequency in a particular facility. Some items may be generalized, but most items in the error budget cannot. The validation does therefore not extend to all frequencies for any antenna to be tested in that facility.

Three methods are used to estimate the magnitude of the following 18 error sources. The three methods are:

1. Error equations that have been derived from mathematical analysis where the uncertainty in a given far-field quantity is given in terms of measurement errors and some information about the AUT.
2. Computer simulation for some error sources where the form of the error can easily be simulated on the computer.
3. Self comparison measurements to obtain an experimental estimate of the error. In this approach a reference measurement is taken with the system in a known state with respect to a specific error source. The system is then changed to increase, decrease or change the sign of that specific error source and the measurement is repeated. A comparison of the far-field results from the two measurements gives an estimate of the effect of the specific error.

#### CAPABILITIES

- Checkout of range accuracy
- Using customer provided antenna
- Based on NIST 18-term model
- Includes range assessment report
- Single frequency acquisition & analysis

## **NSI-SU-5610-4term**

### **NIST 4-Term Range Assessment**

#### **FEATURES**

Planar near-field case:

- Assess measurement truncation term
- Assess probe-AUT interaction term
- Assess chamber scattering term
- Assess leakage and cross-talk term

Spherical near-field case:

- Assess measurement truncation term
- Assess chamber scattering term
- Assess leakage and cross-talk term
- Assess probe position error term

Cylindrical near-field case:

- Assess measurement truncation term
- Assess probe-AUT interaction term
- Assess chamber scattering term
- Assess leakage and cross-talk term

#### **ORDERING INFORMATION**

Please contact the NSI Sales department to order this product.

#### **Nearfield Systems, Incorporated**

19730 Magellan Drive, Torrance, CA 90502, USA, Tel: 310.525.7000, Fax: 310.525.7100  
Email: [sales@nearfield.com](mailto:sales@nearfield.com). Visit our website: [www.nearfield.com](http://www.nearfield.com)