

#### DESCRIPTION

Reflections in antenna test ranges can often be the largest source of measurement errors, dominating all other error sources. The NSI-SW-5109 MARS Reflection Suppression Software uses a new technique developed by NSI to suppress reflections from many sources in a typical spherical near-field antenna test range. The technique, named Mathematical Absorber Reflection Suppression (MARS), is a post-processing technique that involves analysis of the measured data and a special filtering process to suppress the undesirable scattered signals. The technique is a general technique that can be applied to any spherical range. It has been used in a large hemispherical automotive antenna range implemented by NSI for Nippon Antenna in Itzehoe Germany. It has also been applied to extend the useful frequency range of microwave absorber in a spherical near-field system.

#### CAPABILITIES

The MARS software can suppress and/or remove reflections from reflection sources such as a radome or gantry in a spherical near-field range, as well as improve on the performance of a system in a conventional anechoic chamber. There is no additional hardware required to use the technique and a 10 dB to 20 dB improvement in performance can typically be achieved. The technique and its implementation and validation is further described in a technical paper presented by NSI at the 2005 Antenna Measurement Techniques Association (AMTA) annual symposium.

#### FEATURES

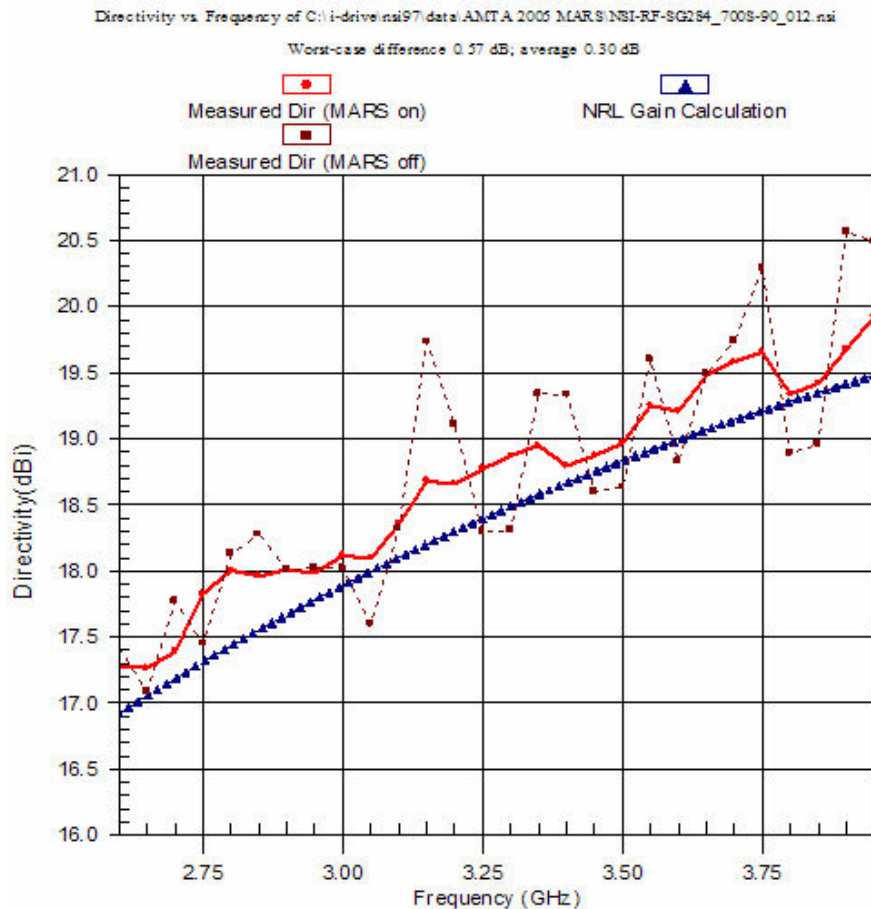
- Suppression of chamber and system reflections
- Suppression of radome and gantry reflections
- Typical improvement of 10 to 20 dB in reflection levels
- Improved Gain and Directivity measurement results
- Improved side lobe and cross-polarization results

## SPECIFICATIONS

Measurement types

NSI-SW-5109 Reflection Suppression software can be added to any NSI spherical NF measurement system

### Directivity vs. Frequency Showing MARS Improvement



NSI's MARS software used to improve gain and directivity measurements in a spherical near-field measurement system in an open lab environment with NO CHAMBER OR ABSORBER

## DIMENSIONS

◆ N/A

## ORDERING INFORMATION

Please contact the NSI Sales department to order this product.

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