

# **AU SPUTTER TARGET for Code 553 Thin Film Deposition System**

PCN: \_\_\_\_\_

## **Background**

- NASA GSFC has a facility for thin film deposition that requires sputter targets of pure materials for production of thin films in devices and integrated circuits. The target is a block of the material GSFC needs to deposit in order to produce thin film circuits and other prototype parts.
- The purpose of this project is to maintain GSFC's thin film deposition capability by procuring a gold (Au) sputter source.
- Projects supported by this sputtering tool include NASA GSFC's x-ray and infrared sensors programs that produce superconducting thin film circuits for detectors, readout, and amplifiers.

## **Objectives**

- The primary objective of this project is to procure a high purity Au sputter target and obtain a certification of the purity of the target upon delivery.

## **Scope**

- The scope of this program is to procure one Au sputter target and an assay of that target. GSFC will trade in its old Au target and apply that metal toward the new target or as a credit toward payment for the new target. This statement of work will discuss the requirements for the sputter sources, the used sputter target that NASA GSFC will trade in, the certification and assay, and terms of payment.

## **Tasks or Requirements**

Sputter target shall be 3 inches in diameter and 0.25 inches thick.

Sputter target shall consist of pure Au (99.999%)

If a lower purity is proposed, target shall be 99.999% pure excluding platinum (Pt)

Vendor shall perform an assay on the target to ensure purity and report impurities measured at ppm levels. All results of the assay shall be provided to the NASA GSFC technical representative upon delivery of the sputter target.

Vendor shall accept the used Au sputter target from NASA as a trade in toward the new target (this Au can be refined and added to the material used in the new target or can be taken as a credit toward the purchase of the new target). The mass of Au in the target is approximately 278 grams.

## **Deliverables or Delivery Schedule**

- Contractor shall provide Au sputter target (6 weeks after date of award)

- Contractor shall test sputter target and provide all testing data to GSFC (provided with target)

**Government-Furnished Equipment and Government-Furnished Information**

- Used Au sputter target will be provided by GSFC for trade in.

**Security**

- None

**Place of Performance**

- All work pertaining to the making of the Au sputter target and its assay will be performed at vendor facilities

**Period of Performance**

- **6 weeks after date of award.**