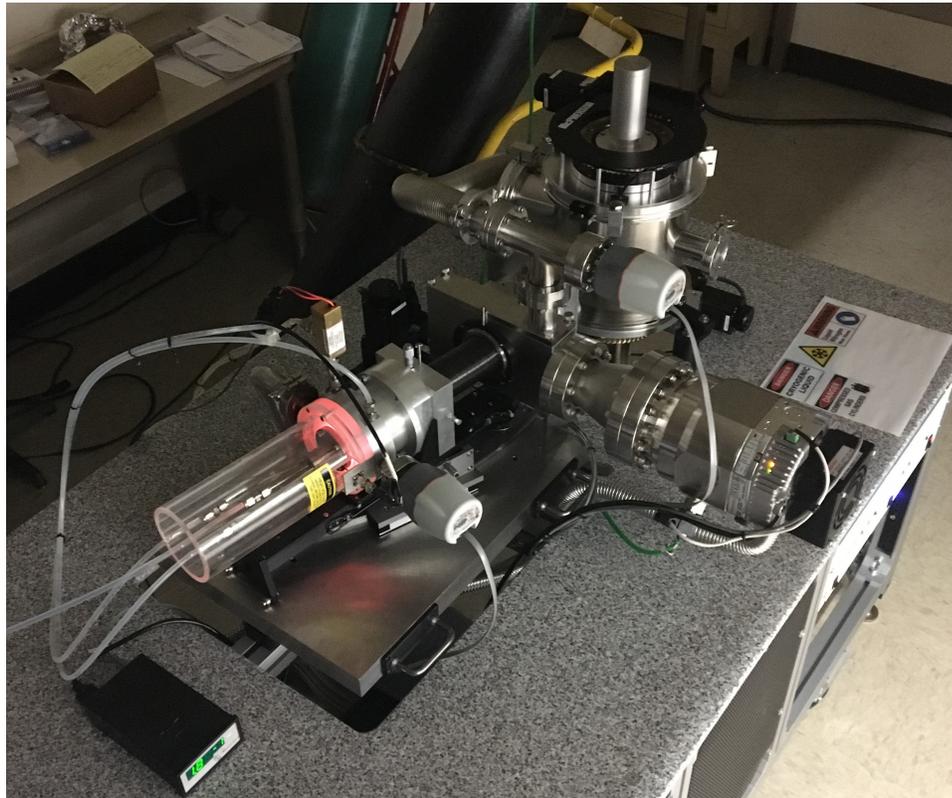


## Spectrophotometer, Extreme Ultra-Violet (XUV to VUV)

Extreme UV (XUV) Spectrophotometer system components:

- Model 248/310 one meter focal length monochromator
- Model 629 hollow cathode source with various gases
- Model 121 motorized goniometric sample chamber

Extreme Ultraviolet (EUV) spectrophotometer with great performance from 30~120 nanometers, also known as the extreme or vacuum ultraviolet (VUV) region. A windowless hollow cathode operated with inert ionized gases provides emission lines. The spectrophotometer has a one-meter focal length monochromator with excellent spectral resolution. Together with scintillated detector and goniometric sample chamber it encompasses optical transmission, absorbance and specular reflectance and may easily be tested with angles of incidence 5~70 degrees or more. Samples are measured in the f/44 diverging light beam. This reduces likelihood of unwanted fluorescence of tightly focused ultraviolet light on diverse sample types. Software controls wavelength, sample and detector angle, and signal collection.



**\*Add electron impact source for operation 1~17 nm region**

## **Spectrophotometer, Vacuum Ultra-Violet (VUV to deep UV)**

### **Vacuum UV (VUV) Spectrophotometer system components:**

- **Model 225 one meter focal length monochromator**
- **Model 629 hollow cathode source (or optional deuterium)**
- **Model 121 motorized goniometric sample chamber**

Ultraviolet spectrophotometer with best performance from 30~160 nanometers, also known as the deep or vacuum ultraviolet (VUV) region. A windowless hollow cathode light source operated with hydrogen gas provides a many-lined continuum from 92~160 nanometers. Other inert ionized gases (Ar, Ne, He) provides emission lines down to double ionized helium at 30 nanometers. A one-meter focal length auto focusing high resolution monochromator provides excellent spectral resolution. Together with scintillated detector and goniometric sample chamber this McPherson system is for optical coating metrology and characterization. It encompasses optical transmission, absorbance and specular reflectance and may easily be tested with angles of incidence 5~70 degrees or more.



**This McPherson spectrophotometer lives at NASA Goddard now, the system will most likely be used to help develop, test and qualify optical materials and coatings for high altitude and extraterrestrial or space flight missions.**