The National Institute of Standards and Technology has had an active program in the calibration of detectors and other instruments in the vacuum ultraviolet spectral region below 200 nm for half a century, since the dawn of the space age and the first space-based observations of our sun, the Earth, and other astronomical targets. Many of the calibration activities center on the Synchrotron Ultraviolet Radiation Facility (SURF III), a compact, low-energy synchrotron radiation source optimized for extreme ultraviolet measurements. In addition to photodetector, filter, and mirror calibrations, we perform calibration measurements on assembled instruments, both space-based and laboratory devices. Recently, we transferred the Naval Research Laboratory’s beamline X24C from the synchrotron radiation source at Brookhaven National Laboratory to SURF III. This beamline has a long pedigree in the calibration of spacecraft instruments. The relocation of this beamline to SURF III will extend the spectral coverage of our detector-based calibrations to both shorter and longer wavelengths, consolidate several calibration facilities into a single synchrotron beamline, and complement the existing source-based calibration facility for space instruments. In this talk, I will give a brief overview of the current NIST calibration facilities and measurement capabilities and describe the improvements to be realized as the new beamline comes on-line, with particular focus on the range of calibration measurements to support space-based measurements.