

# Calibration of UV Broadband Detectors

## Technical Service Overview

Calibration, service and technical assessment of UV broadband radiometers and UV detectors used in operational UV monitoring networks and atmospheric radiation measurement programs.

### 1. Scope

CMS supports the maintenance, service and calibration of UV broadband detectors and radiometric measurement systems used for long-term UV monitoring. The service is intended for scientific monitoring networks, atmospheric radiation stations, environmental agencies, research institutions and operators of UV radiation measurement infrastructure.

The focus is on technically reliable calibration, detector evaluation, documentation and operational support for instruments used in the field.

### 2. Long-term UV monitoring experience

Since 1998, CMS has supported maintenance, service and absolute calibration of UV detectors used within the Austrian UV monitoring network. This includes long-term technical cooperation with local station operators and scientific/environmental monitoring organisations.

CMS operates dedicated UV radiation calibration infrastructure and an outdoor reference measurement site at the company location for comparison measurements, validation and field-related radiometric assessment.

### 3. Typical services

#### Absolute UV calibration

Calibration of UV broadband detectors and radiometers with documented calibration results.

#### Detector service and inspection

Functional checks, optical inspection, condition assessment and plausibility evaluation.

#### Field and laboratory comparison

Comparative measurements using laboratory infrastructure and outdoor reference measurements.

#### Measurement chain assessment

Evaluation of detector response, signal chain, data acquisition and operational measurement conditions.

#### Technical documentation

Calibration documentation and technical reporting for station operators, monitoring programs and quality assurance.

### 4. Measurement context

Application	Typical relevance
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<b>UV monitoring networks</b>	Long-term operation of UV radiation detectors at atmospheric monitoring stations.
<b>UV index and erythemat UV</b>	Detector calibration and evaluation for UV-E / UV-index related measurement tasks.
<b>Environmental monitoring</b>	Operational support for public, institutional and research-oriented radiation monitoring programs.
<b>Radiometric QA</b>	Traceable documentation, comparison measurements and plausibility checks of measured UV data.

## 5. Typical output

Depending on detector type, condition and requested service scope, CMS provides calibration data, service notes, technical observations and recommendations for continued operation or re-calibration intervals.

All calibration and measurement services are project-specific and depend on detector type, available documentation, required spectral/weighted quantities and operational context.

## 6. Contact

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