Faculty of women for Arts, Science and Education
Physics Department

"Establishing a National Standard System for calibration of UV Radiometers"

By
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A Thesis Submitted to the Faculty of women for Arts, Science and Education
Ain Shams University
In Partial Fulfillment of the Requirements for the Degree of
M. Sc. In Physics (spectroscopy)

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Dedication to

My dear father,

My great mother,

My brothers and sisters,

My wonderful husband,

My lovely Kids

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List of Abbreviations

Abb.		Full Term
UV	:	Ultra Violet
ISO	:	International Organization for Standardization
VIM	:	International Vocabulary of Basic and General Terms in Metrology
NMIs	:	National Metrology Institutes
FEL	:	modified incandescent lamps
ECPR	:	Electrically Calibrated Pyroelectric Radiometer
NIST	:	National Institute of Standards and Technology
PDA	:	Photo Diode Array
PMOD	:	Physikalisch Meteorologische Observatorium Davos
WRC	:	World Radiation Center
QASUME	:	Quality Assurance of Spectral Ultraviolet Measurements
PTB	:	Physikalisch-Technische Bundesanstalt
CUCF	:	Central UV Calibration Facility
CIE	:	Commission International de 1'Eclairage
EM	:	Electro Magnetic
UVR	:	Ultra Violet Radiation
BIPM	:	International Bureau of Weights and Measures
CCD	:	Charge-Coupled Device
QTH	:	Quartz Tungsten-Halogen
ESR	:	Electrical Substitution Radiometer
GUM	:	Guide to the expression of Uncertainty in Measurement
MC	:	Monte Carlo
LPU	:	Law of Propagation of Uncertainties
QE	:	Quantum Efficiency

List of Abbreviations

Abb.		Full Term
TRAMP	**:**	Trans-impedance Amplifier
UDT	**:**	United Technology Instrument
FWHM	**:**	Full Width at Half Maximum
ANSI	**:**	American National Standards Institute
Hg	**:**	Mercury
QC	**:**	Quality Control
QA	**:**	Quality Assurance
UCL	**:**	Upper Control Limit
LCL	**:**	Lower Control Limit
CW	**:**	Central Wavelength

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