



Kompetenzzentrum
Ultrapräzise
Oberflächen-
bearbeitung e.V.

Topics

- New developments in measuring techniques for aspherical, free form and cylindrical lenses
- Measurements of small precision optics (as used for endoscopy, mobiles, sensors ...)
- In situ-measurements in complex UP processing lines for aspherical or freeform surfaces
- Standardization in the description of aspheres and freeform surfaces
- Measurements of aspherical surfaces of moulding tools for glass and plastic lenses
- Other topics related to asphere and free form metrology or production

Key Dates

- **Extended Abstract Deadline:** February 15, 2017
- **Deadline Application for Industrial Exhibition:** February 15, 2017
- **Date of HLEM:** March 14 – 15, 2017
- **Venue:** PTB Braunschweig, Germany
- **Attendance Fee:** Lecturers (1st person): € 150,-
Members: € 150,-
Non-Members: € 525,-
Please pay after receiving the invoice
- **Included:** Conference participation, Proceedings, Conference dinner, Refreshments during conference

8th High Level Expert Meeting Asphere Metrology



Contact

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March 14 – 15, 2017
at Physikalisch-Technische Bundesanstalt
Germany



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8th High Level Expert Meeting Asphere Metrology



1st Day, Tuesday, 14 March 2017

12:00 Arrival / Registration,
Lunch, Table Top Presentations

13:00 Conference Opening,
Overview and Outlook;
Frank Löffler; CC UPOB e.V.;
Germany

Session:
Aspherical Surfaces

Holistic Measurement of
Aspheric Lenses by
Model-Based Metrology;
Rainer Tutsch; Technical University
Braunschweig; Germany

In Measurements we Trust –
Decenter and Tilt of
Aspheres; *Ulrike Fuchs*;
Asphericon GmbH; Germany

Non-Contact Measurement
of Aspheric Surfaces
Based on Point Laser
Interferometer; *Xiaofei Diao*;
National Institute of Metrology;
China

After each lecture there will be the opportunity for a short discussion. For more detailed information please visit www.upob.de, you will receive more information about each session as well as additional information relating this event. You'll receive last minute information by visiting our website.

Frequency Scanning Inter-
ferometry for Measurement
of Aspherical Surfaces;
Pavel Psota; TOPTEC;
Czech Republic

Standardization in Asphere
and Freeform Metrology;
Michael Schulz; Physikalisch-
Technische Bundesanstalt; Germany

Session: Moulded and Small
Precision Optics

Lessons Learned From the
Optical Metrology of
Moulded Aspheres for
Cell Phone Cameras;
Xavier Colonna de Lega; Zygo
Corporation / AMETEK Germany
GmbH; Germany

Component-Level Test of
Moulded Freeform Optics
for LED Beam Shaping Using
Experimental Ray Tracing;
Gustavo Gutierrez;
Hochschule Bremen; Germany

2nd Day, Wednesday, 15 March 2017

9:00 Beginning

Session: In Situ-Measure-
ments and Manufacturing

Deflectometric Acquisition
of Large Optical Surfaces
„DaOS“ Using a New Physical
Measurement Principle: Vig-
netting Field Stop Procedure;
Engelbert Hofbauer; Technische
Hochschule Deggendorf; Germany

Production of Precision
Components; *N. N.*;
University of Bremen; Germany

Manufacturing of Freeform
Optics Using Plasma Jet
Machining; *Georg Böhm*;
IOM Leipzig; Germany

Session: Freeform and
Cylindrical Surfaces

Optical Measurement of
Aspheres and Freeforms –
Current Solutions and
Challenges; *Stefan Mühlig*;
Mahr GmbH, Jena; Germany

Interferometric Testing
of Strong Aspheres with
Diffractive Fizeau Null Lenses
(DFNL); *Frank Weidner*;
Dioptic GmbH; Germany

UA3P – Nano Measurement
Accuracy on Asphere and
Freeform Surfaces;
Tomofumi Morishita; Panasonic
Production Engineering Co. Ltd.;
Japan

Freeform Metrology Using
Subaperture Stitching Inter-
ferometry; *Jean-Pierre Lormeau*;
QED Technologies; United States

Challenges in Metrology of
Mirror Segments for X-Ray
Telescopes;
Anne-Catherine Probst;
Hochschule Aschaffenburg;
Germany

Metrology of Mild Freeform
and Cylinder Optics Based on
a Scanning Interferometer;
Gernot Berger; Ametek GmbH,
Business Division Lumphos;
Germany

Characterization of Optical
Components by Novel
PTB-Technologies;
Bernhard Smandek; Physika-
lisch-Technische Bundesanstalt;
Germany

Summary and Outlook

15:40 Conference Closing

Background

During the previous High-Level Expert Meetings (HLEM), developers, manufacturers and users have confirmed the great interest in asphere metrology. Both the introduced measurement systems as well as the results of round robin comparison measurements showed the enormous potential of this field of technology. In addition, a great need for comparability, standardization and proximity to users was also pointed out.

The 8th HLEM 2017 is dedicated to the presentation, discussion and dissemination of new developments and recent scientific results in asphere and free form metrology for reflective and transmissive surfaces.

With this broader scope we aim to supplement our previous events while also addressing asphere and free form metrology to interested scientists, developers and manufacturers.



Programme Committee

Jean-Michel Asfour; Dioptic GmbH
Andreas Beutler; Mahr GmbH
Frank Löffler; CC UPOB e.V.
Rudolf Meeß; CC UPOB e.V.
Oltmann Riemer; University of Bremen LFM
Gunter Schneider; Schneider GmbH + Co. KG
Michael Schulz; PTB

