Kompetenzzentrum
Ultrapräzise
Oberflächen-
bearbeitung e.V.

Please fax your registration to: +49 (0) 531 - 592 - 695131

☐ **I am interested in this meeting. Please send me more information**

☐ **I hereby register for HLEM 2010 – Asphere Metrology**

Firm, Institution: _____

_____

Title, Family Name, : _____
First Name

_____

Adress: _____

Postal Code, City: _____

Tel., Fax: _____

E-Mail: _____

Signature: _____

Attendance may be cancelled by the participant up to 14 days before the meeting starts at 50 % of the attendance fees. Following that date or if the participant does not attend the meeting, we will charge the full amount. Cancellations must be made in writing. We would be glad to accept another participant as attendance fees are transferable.

Organizational details

Date: **10th and 11th March 2010**

Location: PTB-Braunschweig;
Kohlrausch-Bau, Auditorium
Directions: www.upob.de/→Kontakt

Language: English

Accommodation: Recommended accommodation
www.upob.de/→Veranstaltungen
→HLEM 2010

Registration:
Registration deadline:
25th February 2010

Please register by letter or fax using the attached form. Following this you will receive a confirmation.

Attendance fee:

Lecturers: no fees (1´st person)
Members: 100,- €
Non-members: 500,- €
We will send you the invoice for the attendance fee. Please pay this in advance after receiving the invoice.

Contact:

CC UPOB e. V.
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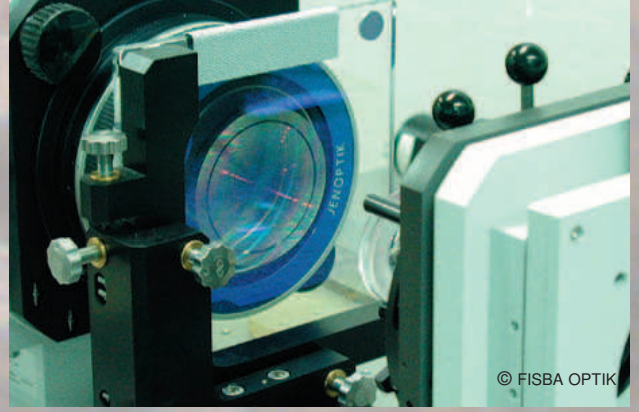
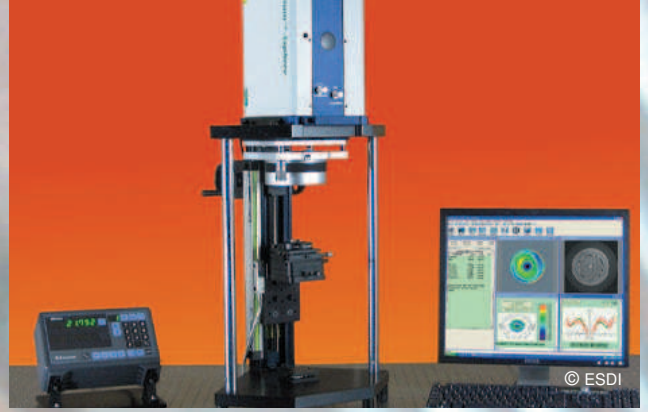
HLEM | **10th and 11th March 2010**

4. High Level Expert Meeting 2010

Expert Meeting "Asphere Metrology on Joint Investigations"





4. High Level Expert Meeting 2010

Aspheres - whether as an aid for poor eyesight, in mobile phones or large optics - are in use all around us. As widespread their applications are, as difficult it is to produce or to measure them precisely. This is revealed by today's practise, where sometimes large measurement uncertainties emerge.

$$z = f(h) = \frac{h^2}{R\left(1+\sqrt{1-(1+k)\left(\frac{h}{R}\right)^2}\right)} + A_4 h^4 + A_6 h^6 + \ldots$$

DIN-ISO 10110-12 Equation

Focal points of the Expert Meeting:

- What is the state of the art today?
- Which procedures have which advantages?
- Are there new approaches to improve existing techniques significantly?
- In which direction should new developments be supported?

Questions like the ones above can be addressed by experts only. The High-Level Expert Meeting, organised by the Kompetenzzentrum Ultrapräzise Oberflächenbearbeitung (CC UPOB e.V.), i.e. the competence centre for ultra-precise surface figuring, aims to bring together these experts from industry and research, developers and users to start the dialogue. This will take place at the

10th and 11th March 2010
in PTB, Braunschweig

Background

Joint Investigation

Two selected aspheres were investigated by fourteen companies and institutes. Theoretical papers introduce in asphere metrology.

The following institutions participate with measurements or theoretical contributions:

Agenda

Day 1: Wednesday 10th March

- **Aspheric testing without mechanical scanning;** C. Pruss; ITO; Germany
- **Accuracy aspects of absolute asphere metrology;** Dr. M. Schulz; PTB; Germany
- **3D- asphere measurement based on contour measuring machines;** Dr. A.Beutler; Mahr GmbH; Germany
- **Nulling Fizeau interferometer for measuring aspheric surfaces;** Dr. P. Szwaykowski; ESDI; USA
- **Asphere measurement by 3-D profilometer (UA3P);** A. Gebhardt / Dr. P. Kühmstedt; Fraunhofer Institute for Applied Optics and precision engineering; Germany
- **Asphere and freeform metrology at IOM;** Dr. G. Böhm/ Dr. T. Arnold; Leibniz-Institut f. Oberflächenmodifizierung (IOM); Germany
- **Measurement of aspheric surfaces using 3D-deflectometry;** W. van Amstel; TRIOPTICS GmbH; Germany
- **Conference Dinner**

Day 2: Thursday 11th March

- **Calibration strategies for the interferometric testing of aspheres;** Dr. K. Mantel; Max Planck Institut Erlangen/ University Erlangen-Nürnberg; Germany
- **Title NN; prospective speaker NN; Jenoptik; Germany**
- **Getting the most out of diffractive null lenses;** Dr. S. Aigner; DIOPTIC GmbH; Germany
- **Subaperture stitching interferometry of aspheres using a variable optical null device;** Dr. A. Kulawiec; QED Technologies International; US
- **Measurement of aspheres using a commercial Twyman-Green interferometer;** T. Blümel, R. Kafka, C. Brüggemann; FISBA OPTIK Berlin / St. Gallen; Germany / Switzerland
- **Scanning Fizeau interferometry for low uncertainty asphere testing**; T. Glaschke; ZygoLOT; Germany
- **Tilted wave interferometry; E. Garbusi; ITO; Germany**

In the lectures of 30 minutes each, the manufacturers will present their measurement procedures and the results of their investigations on the test aspheres. Following there will be a chance for discussions. Before the start of the meeting, we will send you the final agenda and also publish it on our homepage: **www.upob.de**