15th - High Level Expert Meeting (HLEM 2027) - Asphere Metrology

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Title	15th - High Level Expert Meeting (HLEM 2027) - Asphere Metrology
When	Mo, 8. März 2027 - Mi, 10. März 2027

Description

15th - High Level Expert Meeting (HLEM 2027) - Asphere Metrology

In the field of asphere metrology, many new advancements were achieved, new measurement procedures were developed and precision was noticeably improved. In previous High-Level Expert Meetings (HLEM) and workshops, developers, manufacturers and users have confirmed the great interest in asphere metrology.

Please learn more about previous events by following links (Workshop 2026**,** HLEM 2025**, Workshop 2024,**HLEM 2023, HLEM 2022, HLEM 2021, HLEM 2019**, HLEM 2018, HLEM 2017**; **Workshop 2016**; **HLEM 2015**; **HLEM 2013**; **Workshop 2012; HLEM 2012, HLEM 2010**)

In order to manufacture ultra-precise and high-tech optical components and to be capable of further miniaturization, reliable and extremely precise measurement technology is required. Both the introduced measurement systems as well as the results of round robin measurements show the enormous potential of this field of technology. In addition, a great need for comparability, standardization and proximity to users was also pointed out.

Save the DATE - 15th HLEM 2027, March 8-10, 2027! R e g i s t e r H E R E ! Find here the Call for Measurements and Contributions **Find here the Program Flyer Find here the Program-Perview Find here the Detailed Program**

This HLEM 2027 website will be actualized regularily, do you need any information that is currently not avaliable here?

Don´t hesitate to contact Mr. Klawitter in our administrative office!

HLEM in Spring 2027

Our upcoming 15th HLEM 2027 is dedicated to the presentation of measurement results of current lenses, 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.

The samples are available for measurements through kind support of HZB, DIOPTIC, Innolite, and Edmund Optics. The marks on the glass samples were realized by NTG.

#10.1	HLEM 2023-2027 - Sample #10 Part 1 Double-Sided Asphere - Concave - 28 mm	
#13.1	HLEM 2023-2027 - Sample #13 Part 1 Double-Sided Asphere - 25 mm	
#14.1	HLEM 2027 - Sample #14 Part 1 or 2 Large Free-Form Mirror - 200 mm	
#15.1	HLEM 2027 - Sample #15 Part 1 Cylindrical Synchrotron Mirror - 100 x 30 mm	

The following samples are available:

■ double-sided asphere concave 28 mm (#10.1) - unmounted

■ double-sided asphere convex 25 mm (#13.1) - unmounted

■ large free-form mirror - 200 mm (#14.1) - unmounted

■ cylindrical synchrotron mirror - 100 x 30 mm (#15.1) - unmounted

Planned Main Topics of HLEM 2027

Several companys and institutions are planning to perform measurements on the available samples.
Main topic of the conference will be the presentation of the measurement results of the four samples.

Main Topics:

■ Measurement on round robin samples

■ Presentation of the round robin results

■ Comparison of the round robin results



The following topics are also of interest:

Additional Topics:

■ Measurement of large and medium-size optics

■ Measurement of inner centration of aspheres

■ Measurement of free-form surfaces

■ Developments in measuring techniques for aspherical free-form and cylindrical lenses

■ Other topics related to asphere and free-form metrology or production

D o w n l o a d h e r e the Detailed Program! D o w n l o a d h e r e the Program Flyer!

Y o u r c h a n c e t o j o i n !

■ Would you like to perform measurements and give a presentation?

■ Would you like to receive more details of the "round robin" samples?

■ Would you like to give a lecture without measurements?

■ Are you interested in participating?

■ Are you interested in participating in the supporting exhibition?

Please send an e-mail with your request to: info@upob.de

D o w n l o a d h e r e your registration! **YSA 2027 - Young Scientist Award**

Awarding the **6th Young Scientist Award** (YSA) will round out the programme!

In addition to the scientific part of the event, which focuses on the topic of asphere metrology, the CC UPOB e.V. will award a prize for the 6th time in 2027. Young scientists (Bachelor, Master, PhD-Student or Post-Doc up to 3 years after the end of their academic education) have opportunity to present their work to an interested specialist audience during the High-Level Expert Meeting. By a jury of the participants the best work will be selected and priced.

Submissible topics are scientific papers from the following fields of activity:

■ precision methods e.g. MRF, SPDT, IBF ...

■ approaches to additive precise optics production

■ cleaning and coating, multi-layer coatings

■ metrology and data analysis in production chain for aspheres and freeforms

■ ultra-flatness; diffraction base plates; nanostructures

Applicants have the opportunity to apply with an abstract in english with a picture and 250 words by January 12, 2027 at the CC UPOB e.V. office.

At the beginning of the conference, the pre-selected works will be presented by the candidates in a short presentation.
During the breaks, the participants can continue to find out about the topics in a poster session.
At the end of the conference, the award ceremony will take place.

You will find more details in **HLEM Call for Papers** and also in **HLEM Program Flyer (coming soon).**

Key Dates Measurement Schedule:

■ Start of measurements:
June 1, 2026

■ Deadline for performing measurements:
November 30, 2026

■ Application for measurements:
OPEN for HLEM 2027, interested? Please send an e-mail to our administrative office

■ Deadline to submit measured data:
Not later than 2 weeks after end of your measurement period

Participation Schedule:

■ Conference Date:
March 8-10, 2027

■ PTB-Lab visit:
TBA

■ Get Together:
March 8, 2027; 19:00 (Details TBA)

■ Conference Dinner:
March 9, 2027; 19:00 (Details TBA)

■ Registration Deadline:
February 20, 2027

■ Registration:
Please register by letter, fax or E-Mail using the **registration form.**
Following this you will receive an invoice and confirmation.

Organzational Details:

■ Conference Language:
english

■ Start registration: **OPEN**
Autum 2026 **(download registration form here)**

■ Attendance fees:
Lecturers: € TBA (1st person)
Members: € TBA
Students: € TBA
Non-members / others: € TBA

Please pay in advance after you have received the invoice.

Exhibition Schedule:

■ Deadline registration for industrial exhibition:
March 1, 2027

Submission Details:

■ Presentation Duration:
All Presenters: 20-25 minutes
Young Scientist Award: 10-15 minutes

■ Documents Required:
Abstract and Tabular CV
Please send your Abstract to info@upob.de

■ Abstract Content:
250 Words, 1-3 Pictures

■ Final Abstract Submission Non-Measurement Contributions:
October 15, 2026 - extended to November 15, 2026

■ Final Submission Author & Title:
October 15, 2026 - extended to November 15, 2026

■ Final Abstract Submission YSA:
January 12, 2027

■ Results of Abstract Review:
within 2 weeks

■ Deadline to submit presentation slides:
(to download by participants)
March 8, 2027

Travel and Location Details:

■ Date of Meeting:
March 8-10, 2027

■ Recommended Accomodation:
We have not reserved a contingent, we recommend the following hotels:
Best Western City Hotel
Hotel Deutsches Haus
Hotel Fürstenhof
ACHAT Hotel Braunschweig Pentahotel Braunschweig

■ Get Together:
==> Details are coming soon

■ Conference Dinner:
==> Details are coming soon

■ Conference Location:
The conference takes place in:
PTB´s Seminar Center; Bundesallee 100, 38116 Braunschweig, Germany

■ Travel to PTB in Braunschweig:
You can find here all necessary information for your travel

■ Download:
Please find all **downloadable files of this event here**

Contact:

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Please send e-mails to info@upob.de

Bundesallee 100
38116 Braunschweig
Germany

Venue - Physikalisch-Technische Bundesanstalt (PTB)

Location	Physikalisch-Technische Bundesanstalt (PTB)
Street	Bundesallee 100
Postcode	38116
City	Braunschweig
County	Niedersachsen
Country	DE
Website	http://www.ptb.de