# 13th - High Level Expert Meeting (HLEM 2023) - Asphere Metrology

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|---|---|
| **Title** | 13th - High Level Expert Meeting (HLEM 2023) - Asphere Metrology |
| **When** | Di, 28. März 2023 - Mi, 29. März 2023 |

## Description

**13th - High Level Expert Meeting (HLEM 2023) - 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 (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 NEW DATE - 13th HLEM 2023, March 28th - 29th, 2023! 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 2023 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!




ONE Location TWO Events

In spring 2023 a special event will take place - a combination of scientific event and trade fair. On the one hand our popular **HLEM** takes place, on the other hand, the intersting **W3+ FAIR**

**Wetzlar** is held at the same time.

For the first time the Competence Centre Ultraprecise Surface Processing UPOB is taking advantage of the trade shows top class environment to host the 13th High Level Expert Meeting (HLEM 2023). The two day event with topic Asphere Metrology kicks off the day the fair is set up, March 28th 2023.

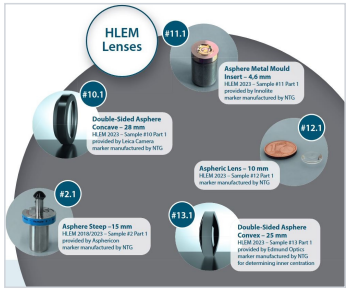
The cross-industry platform (W3+ FAIR) for enabling technologies, invites companies from optics, photonics, electronics and mechanics to Buderus-Arena Wetzlar.

Learn more by visiting [W3+ FAIR website here.](#)

HLEM in Spring 2023

Our upcoming 13th HLEM 2023 is dedicated to the presentation of measurement results of current lenses (5 parts), 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 five different samples are available for measurements through kind support of Aspheric on, Leica Camera, Innolite and Edmund Optics. The marks on the glass samples were realized by NTG.




**The following samples are available:**

■ asphere steep 15 mm (#2.1) - mounted on mandrel

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

■ asphere metal mould insert 4,6 mm (#11.1)

■ asphere lens 10 mm (#12.1) - unmounted

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

Planned Main Topics of HLEM 2023

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.



13th HLEM 2023 – Asphere Metrology
Detailed Programme
V2.0

| DAY 1 | Tuesday, March 28th, 2023<br>Session: Round Robin: Measurement Technologies and Results<br>Chair: Clemens Kunisch<br>Leibniz-Institut für Werkstofforientierte Technologien - IWT, Germany | Afternoon |
|---|---|---|
| 12:00 | Panasonic UA3P: UPOB Sample Results – Technical News About the UA3P System<br>Tomofumi Morishita, Panasonic, Japan | |
| 12:30 | Lunch and Coffee Break, Technical Exhibition and YSA Poster Session | group photo time! |
| 13:30 | Precision Measurement of Small Optics Including Relational Datum Parameters by use of a Scanning Point<br>Marc Wendler, Taylor Hobson, Germany | |
| 14:00 | Capabilities of Multi-Sensor Technologies for the Measurement of Molds and Complex Optics<br>Mario Fischer, Mahr GmbH, Germany | |
| 14:30 | Round Robin HLEM 2023 – Measurement of Aspheric Lenses by New VSPOT Technology<br>Ronald Kamelke, Hofbauer Optik Mess-& Prüftechnik, Germany | |
| 14:55 | Simple Centering Technology on Aspheres – also Double-Sided<br>Engelbert Hofbauer, Hofbauer Optik Mess-& Prüftechnik, Germany | |
| 15:05 | Coffee Break, Technical Exhibition and YSA Poster Session | |

Main Topic:

■ Measurement of small lenses

■ Presentation of the results of the round robin

■ Comparison of current results

The following topics are also of interest:

Additional Topics:

■ New developments in measuring techniques for aspherical, free-form and cylindrical lenses

■ Measurement of unmounted aspheres

■ Measurement of endoscope optics

■ Measurement of mobile phone optics

■ Inner centration of aspheres

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

Download here the Detailed Program! Download here the Program Flyer! Your chance to join!

■ 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 2023 - Young Scientist Award**

Awarding the 5th Young Scientist Award 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 5th time in 2023. Young scientists up to the age of 30, 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 15.01.2023 ==> extended to 22.02.2023 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.**

**Key Dates Measurements & Meeting:**

■ Start of measurements:
1 August 2022 - 15 December 2022

■ Application for measurements:
open for next meeting in 2024

■ Abstract deadline „none measurement contributions“:
30 September 2022

■ Deadline for performing measurements:
15 December 2022

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

■ Deadline to submit author & title:
30 September 2022

■ Deadline to submit presentation slides:
(to download by registered participants)
20 March 2023

**Exhibition:**

■ Deadline registration for industrial exhibition:
1 March 2023 (first come first serve)

**Participation:**

■ Start registration:
Autum 2022 (download registration form here)

■ Deadline registration:
1 March 2023 ==> extended to 15 March 2023

Organizational Details

■ Date of Meeting:
28 - 29 March 2023

■ Language:
english

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

■ Attendance fee:
Lecturers: € 250 (1st person)

Members: € 250
W3+ Exhibitors: € 500
Wetzlar Network Partner: € 500
Non-members / others: € 650

Please pay in advance after you have received the invoice.

■ Recommended Accomodation:
The hotel situation during the HLEM and the Trade Fair W3+ in Wetzlar is relaxed.
We have not reserved a contingent, we recommend the following hotels:
Leitz Hotel
**Michel Hotel**
**B&B Hotel Wetzlar**
**Best Western**

■ Get Together: ==> not planned in 2023

■ Conference Dinner:
Attendees of our HLEM 2023 are invited to **Steakhouse Bolero** in Wetzlar
(For Entry please wear your Name Badge)
Address: Steakhaus Bolero, Kornmarkt 7-9 / 35578 Wetzlar

■ Trade Fair W3+ Visit included:
Attendees of our HLEM 2023 can also **visit the W3+ Fair** free of charge

■ Apero after the HLEM and W3+
Attendees of our HLEM 2023 and the W3+ are invited to network with W3+ exhibitors
29.03.2023; Start 17:15; Lounge Area in Buderus Arena

■ Conference Location:
Buderus Arena Wetzlar
Wolfgang-Kühle-Straße 1, 35576 Wetzlar, Germany

■ Travel:
==> details are coming soon

■ Download:
Learn more about all downloadable files of this event here

Contact:

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38116 Braunschweig
Germany

## Venue - Buderus Arena Wetzlar

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| **Location** | Buderus Arena Wetzlar |
| **Street** | Wolfgang-Kühle-Straße 1 |
| **Postcode** | 35576 |
| **City** | Wetzlar |
| **County** | Hessen |
| **Country** | DE |
| **Website** | https://www.buderus-arena.de/ |