

WG1-5th meeting – meeting minutes

Location: Join Zoom Meeting - <https://fmi.zoom.us/j/8023691764> - Meeting ID: 802 369 1764

Date/Time: 2nd of December, 2020

Host: 17:00-18h30 (UTC)

Protocol: Illumination Power Stability

Participants

Acton	Sydney	
Bagley	Steve	
Bammann	Rodrigo	x
Bassi	Andrea	
Birngruber	Konstantin	x
Boczonadi	Veronika	
Boehm	Ulrike	x
Colarusso	Pina	x
Cole	Louise	
Dietzel	Ralf	x
Drent	Peter	x
Ebeling	Carl	
Eismann	Frank	x
Faklaris	Orestis	
Felscher	Andreas	x

Gaudreault	Nathalie	x
Gelman	Laurent	x
Gudavičius	Dominykas	
Guilbert	Thomas	
Jaffe	Claudia	x
Kirchenbüchler	David	
Kirchner	Marcel	x
Krens	Gabriel	x
Laude	Alex	x
LeDue	Jeffrey	x
Levitt	James	
Mitkovski	Mišo	x
Monterroso	Baptiste	
Munck	Sebastian	x
Nelson	Michael	

Nitschke	Roland	x
Ossato	Giulia	x
Resch-Genger	Ute	
Schroth-Diez	Britta	x
Schwartz	Stanley	x
Schütz	Lucas	x
Thuenauer	Roland	
van der Oord	Kees	x
van Oostende-Triplet	Chloe	
Wilde	Geraint	
Zuschratter	Werner	
Grunwald	David	x
Roume	Florestan	x

Minutes

1. Welcome new participants (new participants were added)
2. Agreement on minutes of last meeting (all agreed)
3. Agreement about recording the meeting (yes, meeting was recorded)
4. Review comments on ISO_Manual_WG1 Link to document:
https://bwsyncandshare.kit.edu/apps/onlyoffice/422143869?filePath=%2FQA%20and%20Reproducibility%20for%20Instruments%20and%20Images%20in%20LiMi%2FWG%201%20Illumination%20power%2FISO_manual_WG1.docx
 - 4.1. Point 10 short term stability (quick review from last meeting)
 - Interval for laser source power (recommendations from K. Bimgruber, R. Dietzel and A. Felscher):

Laser Type	Interval for Power
Gas laser	Every 2-4 weeks
DPSS laser	Every 2 months (probably the AOM or AOTF have bigger influence than the laser itself)
Diode laser	Every 3-4 month

- Was added as Point 12. Can be part of the troubleshooting section (what to do if you find instability...)
- Add an appendix that will contain data about power meters (read out time or pixel dwell time, Thorlab and Coherence) and a troubleshooting guide or even how to use your power meter (at least from the main power meter vendors but may need to be updated as other models become available).
- Possibility of using the point bleach protocol on system where it is available
- All agreed with recording for every second for 5 min for a single point measurement.

4.2. Point 9 The integration time of the power meter should be set properly: to be discussed in subsequent meetings. May need help from companies.

4.3. Point 11 what index of stability do we want to use:

- Iso document has a proposition
- We need to know from each Microscopy company the proper way to use each system to make these measurements (point scanner confocal versus spinning disk). Should be included as an appendix and list the how to for each system. (Issue with parking laser and blinking)
- The test should be done in a similar manner as the experiment/application will be conducted.
- Synchronize sensor with laser? Can you do this with your power meter? Can be a problem.
- Include macros for ease of recording this data?
- Formula will be kept
- The recommendations given on point 11 is from the ISO. It is trying to mimic a time lapse experiment.

4.4. Point 12 frequency (see above)

4.5. Other points:

- We should make a distinction between recommendations for measurements to be made by core facility staff (for general instrument performance) and users (for experiments/data reproducibility and standardization).
- Template for data collection should contain the following: raw values, metadata of the experiment, power meter brand, last calibration date, type of scope and brand, laser info, objective, type of measurements (single point or raster scan measurements), wavelength. Integrate formula in template.

Action item	Owner	Deadline	Status
Review new comments and suggestions on main document	At meeting #	[Date]	[Status, like "in process" or "Done"]
Discuss point 9	At meeting #		
Review supplement/appendix	At Meeting #		

Action item	Owner	Deadline	Status
Review new comments and suggestions on main document	At meeting #	[Date]	[Status, like "in process" or "Done"]
Collect data from your system using the current protocol	All members		
Create template for data collection	Laurent/Nathalie		
Possibility of including a survey on current method and frequency of measurements used by the members of WG1 (include type and brand of power meter used)- survey task	Laurent/Nathalie		
Send Agenda for next meeting	Laurent	03/02/2021	
Other topic to discuss: Linearity of the detection and illumination power	At meeting #		