WG1 meeting 04-11-2020

Participants

Present

Laurent Gelman, Stan Schwartz, Alex Laude, Nathalie Gaudreault, Roland Nitschke, Ulrike Boehm, Frank Eismann, Britta Schroth-Diez, Marcel Kirchner, Ralf Dietzel, Andreas Felscher, Konstantin Birngruber, Mišo Mitkovski, David Grunwald, Rodrigo Banmann, Pina Colarusso, Lucas Schuetz, Florestan Roume

Excused

Manual Deutsh, Werner Zuschratter, Sebastian Munck, Andrea Bassi, Ute Resch-Genger, Claudia Jaffee, Orestis Faklaris, Oxxius, Steve Bagley

Meeting Notes

From the agenda:

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. Summary discussion Roland Nitschke/ Laurent Gelman about laser power

   Point 8 on laser intensity value:

- Finish discussion on recommended values of laser power at which to measure the stability of your laser. Ulrike to bring a slide to illustrate the point of Roland and Laurent.
- DG: Linearity measurements is important and requires at least 5 points.
- The linearity measurements could be used for the sensitivity as well. This is a different point in the ISO document.
- Because laser power (for Argon laser for example that decrease by up to 50% within 6 months) value decrease over time we should recommend using a specific value in mW.
- We should add multiple point measurements and get the linearity at the same time (5 or 8 points).
- A frequency scheme for the linearity measurements should be recommended.
- There is a difference between short term and long-term linearity.
- Laser power measurements are very time consuming. For the community to adopt these recommendations we need to precise the frequency at which these measurements need to be made. Daily, weekly, monthly basis recommendations.
- We should specify the expected life span of a laser and expected decrease in power over time. AF: we should not expect any drift of output power over time. If we do there is an issue with the laser. Often the reproducibility of the measurements can be at fault.
- We should make recommendations for core facility and for users (different depth and frequency of measurements.

- AL: What about pixel to pixel or line to line variability. Is important for certain type of microscopy but is really hard to measure.
- Frequency recommended depends on the type of laser. Maybe also type of applications.
- Provide a list of types of power meters.

  Decision: we will keep what we have now and add a recommendation on frequency for now. We should keep AOTF contribution in mind.

  Point 9 integration time of the power meter:

- You need to have access to a laser beam park function. The measurements is very dependent on the integration time.
- Spinning disk: use stream mode and not an exposure time to prevent blinking and/or issues with the pinholes.
- Need to know the integration time of your power meter.

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).

5. Review comments on ISO Manual V2 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

6. Next steps

Action items for next meeting

- Review new comments and suggestion on main document
- Review supplement/appendix?
- 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)
- Next meeting first Wednesday of December (December 2nd 2020)