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Federal Institute of Metrology METAS



BxDiff – WP1

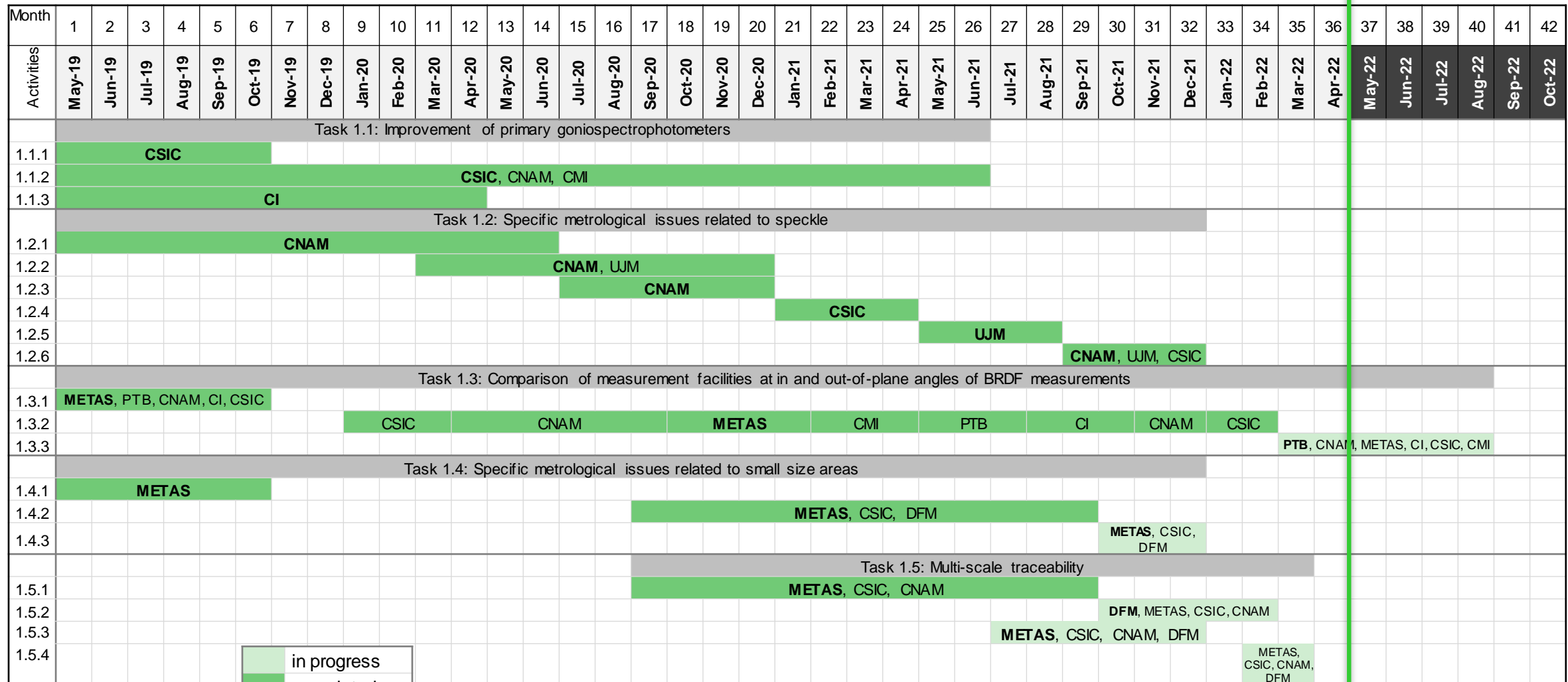
Objectives and progresses

Objectives

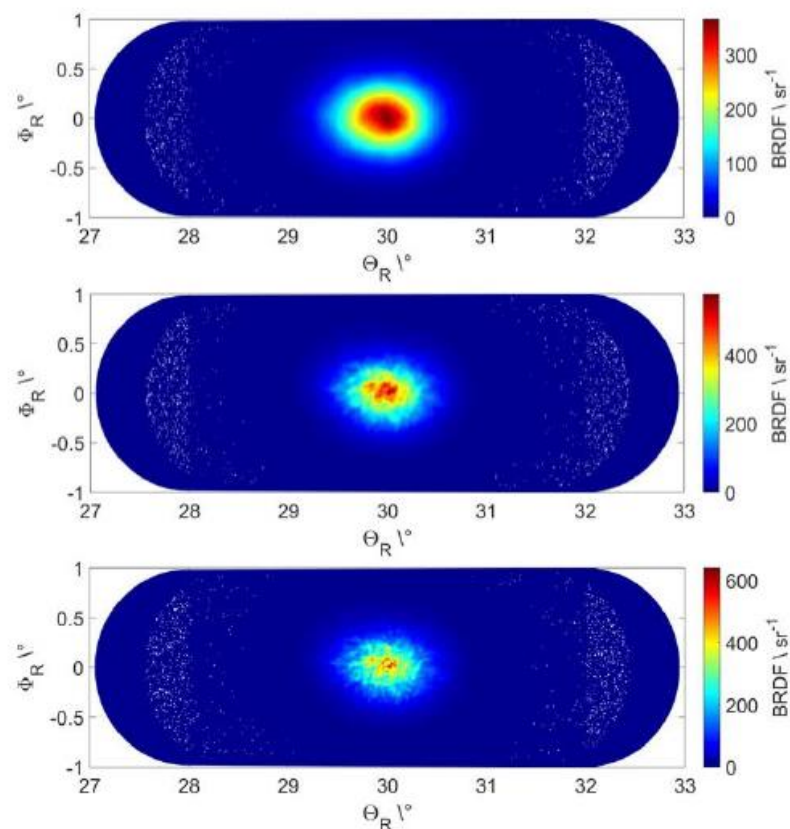
The scientific objectives for WP1 are:

1. To address advanced metrological issues related to BRDF measurements in order to reduce by a factor 2 the measurement uncertainty, and reach an agreement of 0.1 % ($k = 2$) between NMIs, in favourable spectral and geometrical measurement configurations.
2. To establish a full metrological traceability of the BRDF from small objects (micrometre-scale) to regular objects (centimetre-scale)

Gantt chart



Pierre Chavel, Mathieu Hébert, Lionel Simonot, Thomas Labardens, Ana-Maria Rabal-Almazor, et al..
 Advocating a statistical definition for the BRDF. 14th International Conference on New Developments
 and Applications in Optical Radiometry (NEWRAD 2021), Jun 2021, Online, United States. hal-
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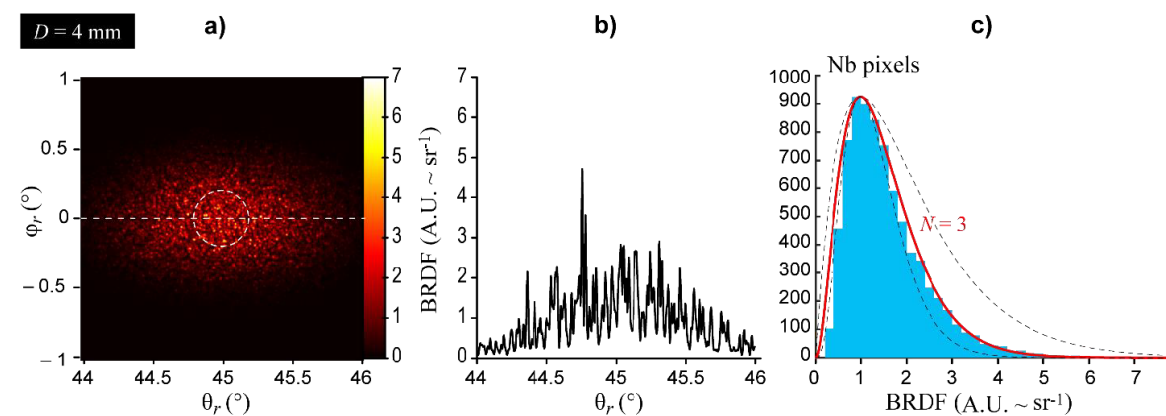
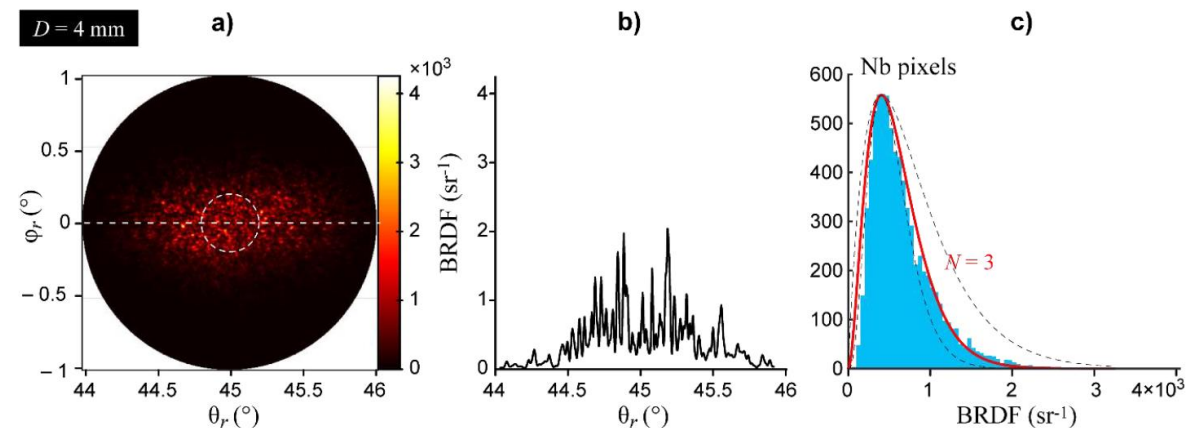
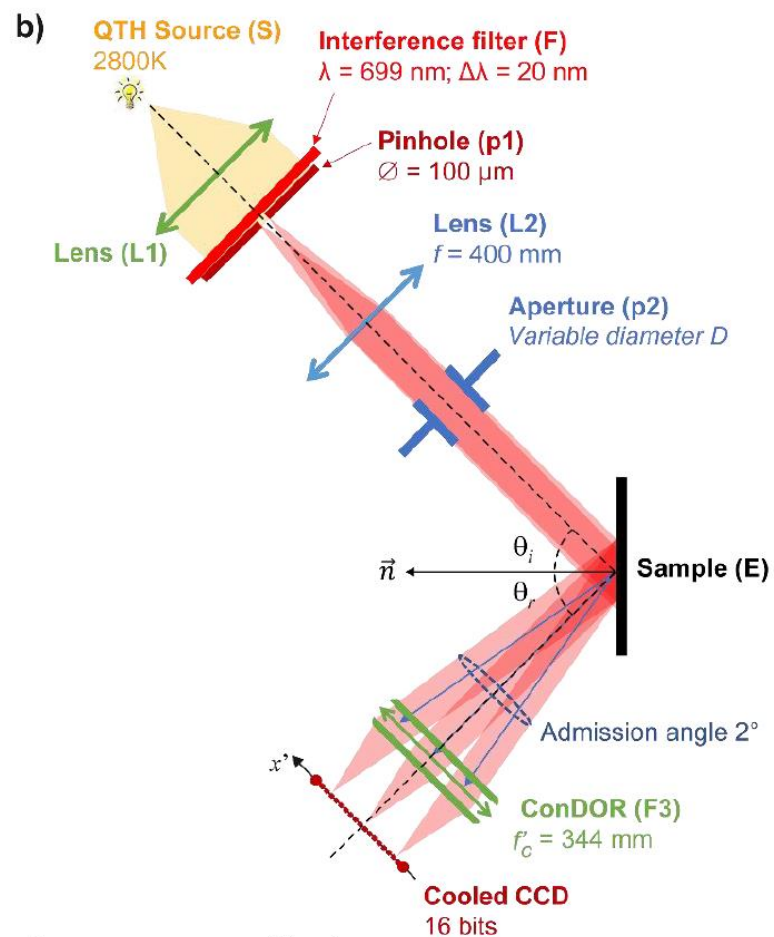
BRDF

$$f(\mathbf{i}, \mathbf{o}) = \frac{\langle L(\mathbf{i}, \mathbf{o}) \rangle}{E(\mathbf{i})}$$

BRDF

Study and simulations of speckle effects on BRDF measurements at very high angular resolution

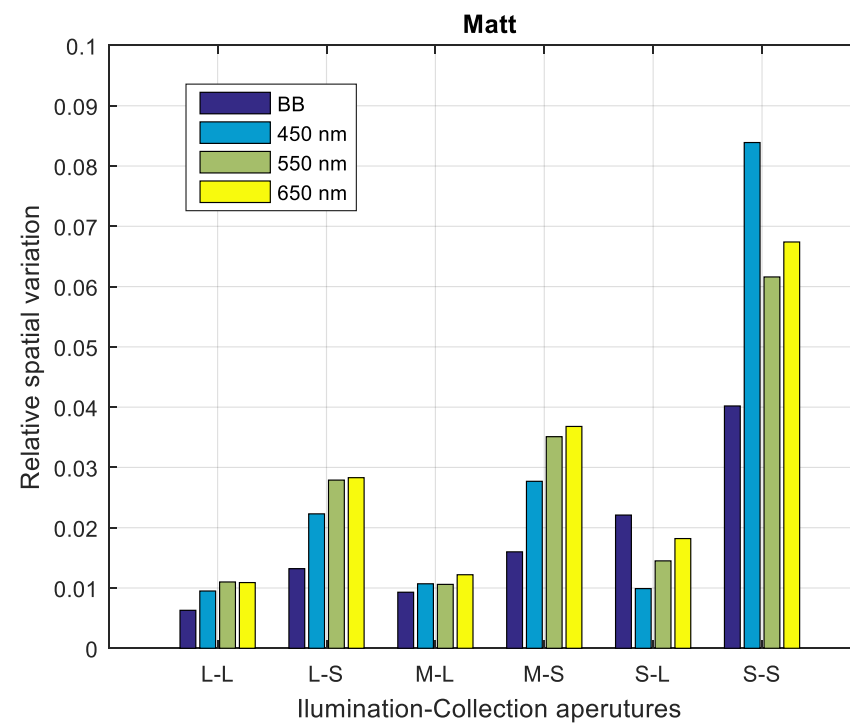
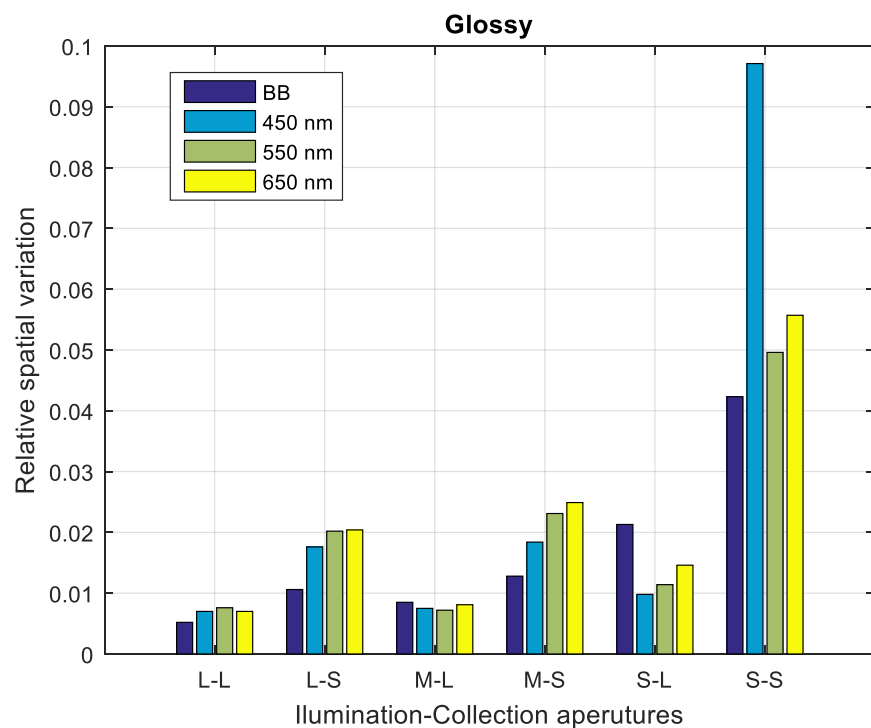
Thomas Labardens^{1,2}, Pierre Chavel², Yvan Sortais³, Mathieu Hébert², Lionel Simonot⁴, Ana Rabal¹, and Gaël Obein¹



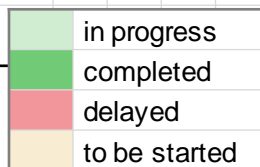
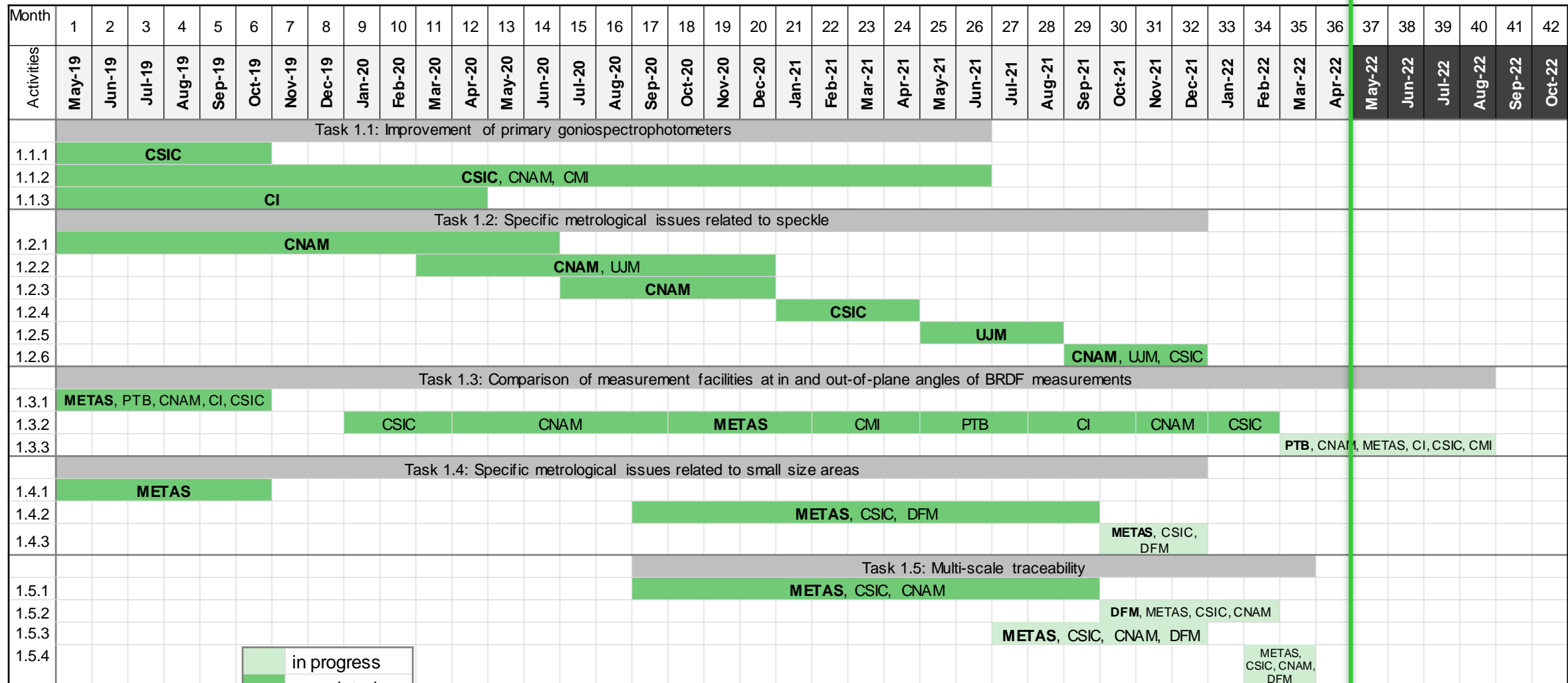
Analysis of the impact of the speckle phenomenon on BRDF measurements

Alejandro FERRERO

Instituto de Óptica, Consejo Superior de Investigaciones Científicas (CSIC), Spain



Gantt chart





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Thank you for your attention