

## ***Interactive comment on “Evaluation of the capacities of a field absolute quantum gravimeter (AQGB01)” by Anne-Karin Cooke et al.***

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We would like to thank both reviewers for their valuable comments. We agree with the two reviewers that additional factors should be included in the assessment of a field instrument, such as the impact of wind, humidity, cable insulation, and the further mentioned aspects. These are indeed interesting and important aspects and will eventually be evaluated, as the assessment of the instrument is still work in progress. Moreover, we understand from both reviews, that additional instrumental details and information on the measurement protocol need to be included in the manuscript. We will provide the missing information. Apart from these points, we do agree that a wider temperature range needs to be tested in the future.

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One of the main points that has been made in both reviews is that this study focuses predominately on observatory conditions that have been altered to test specific aspects of field conditions. The chosen measurement conditions indeed do not resemble real terrain conditions in all possible aspects. This suggests that the title probably has to be adapted to make clear that we investigate ‘semi-terrain’ conditions or preparatory tests in an iterative approach.

Since the submission of the article, we conducted gravity measurements in a non-observatory, less controlled environment. We would like to briefly present the results here as they represent the next step towards deployment under field conditions and may answer some questions raised.

The measurements have been carried out in a garage located in an urban area in Montpellier, France. The garage is neither insulated nor air-conditioned. During two weeks, the temperature in the garage varied between 19 and 30 °C, due to the diurnal cycle. Moreover, short-term and rapid temperature changes of several degrees C have been achieved by opening the front and back garage doors in the early morning and evening. The doors have been left open for up to several hours. We did not explicitly measure wind or humidity changes. However, opening the doors clearly caused noticeable air circulation in the room. During those two weeks, both dry and sunny as well as very rainy weather conditions have been observed. Furthermore, the urban area showed increased vibrational noise levels. Under all these conditions, the AQG#B01 time series was stable and did not appear to be impacted by temperature or other changes.

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