

# QuADC Newsletter

The newsletter from the EMPIR project 15SIB04 QuADC  
Waveform metrology based on spectrally pure Josephson voltages

Issue 2  
December 2017

## THE PROJECT

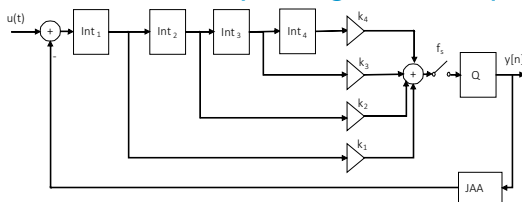
This project develops measurement systems centered on true AC-voltage quantum devices which will both operate at the highest level of accuracy and be simple enough for exploitation outside the national metrology institutes. The term "true quantum devices" refers to the recently achieved breakthrough which provided spectrally pure quantised Josephson AC-voltages exceeding for the first time the usability threshold of 1 V RMS.



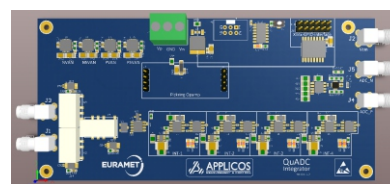
The EMPIR initiative is co-funded by the European Union's Horizon 2020 research and innovation programme and the EMPIR Participating States

## ON-GOING WORK Examples

A 20 MHz feedback loop design for the quantum voltage digitiser is in progress...

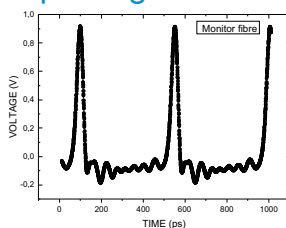


Modelling of Delta Sigma electronics @ INTI

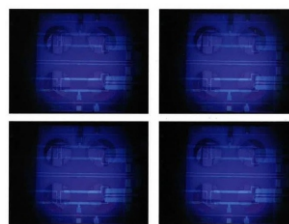


1st APPLICOS integrator prototype finalised

### Optical pulse generation @ VTT...

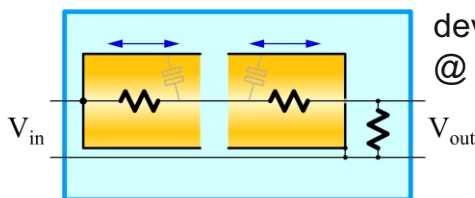


### Mounting of Photodiodes...



JV and HSN cooperation has made it on the cover of IEEE Trans. on Components, Packaging and Manufacturing Technology!  
[click here](#)

## Novel voltage scaling devices with 100:1 ratio covering the frequency range DC to 100 kHz...



development @ RISE



aligned buffer amplifier developed @ CMI

Want more information?

Visit our website or email us

<https://ptb.de/empir/quadc-home.html>  
[ralf.behr@ptb.de](mailto:ralf.behr@ptb.de)

## UPCOMING CONFERENCE

Conference on Precision Electromagnetic Measurements  
July 8 - 13, 2018 PARIS • FRANCE

Join our presentations and meet us for discussions!



## NEXT PROJECT MEETING

On 28-29 August 2018, we will hold our next project meeting in Gothenburg, Sweden.

Let us know if you are interested in attending the public part!

