

EMPIR 19ENV01 traceRadon Training Course #1

New transfer standards: comparison campaigns

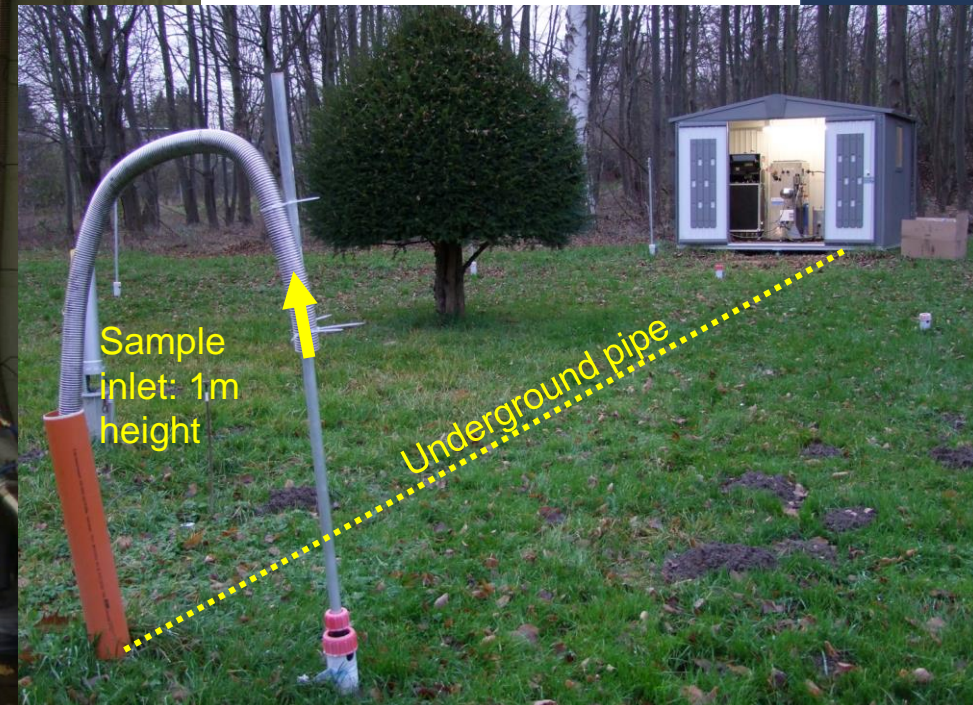
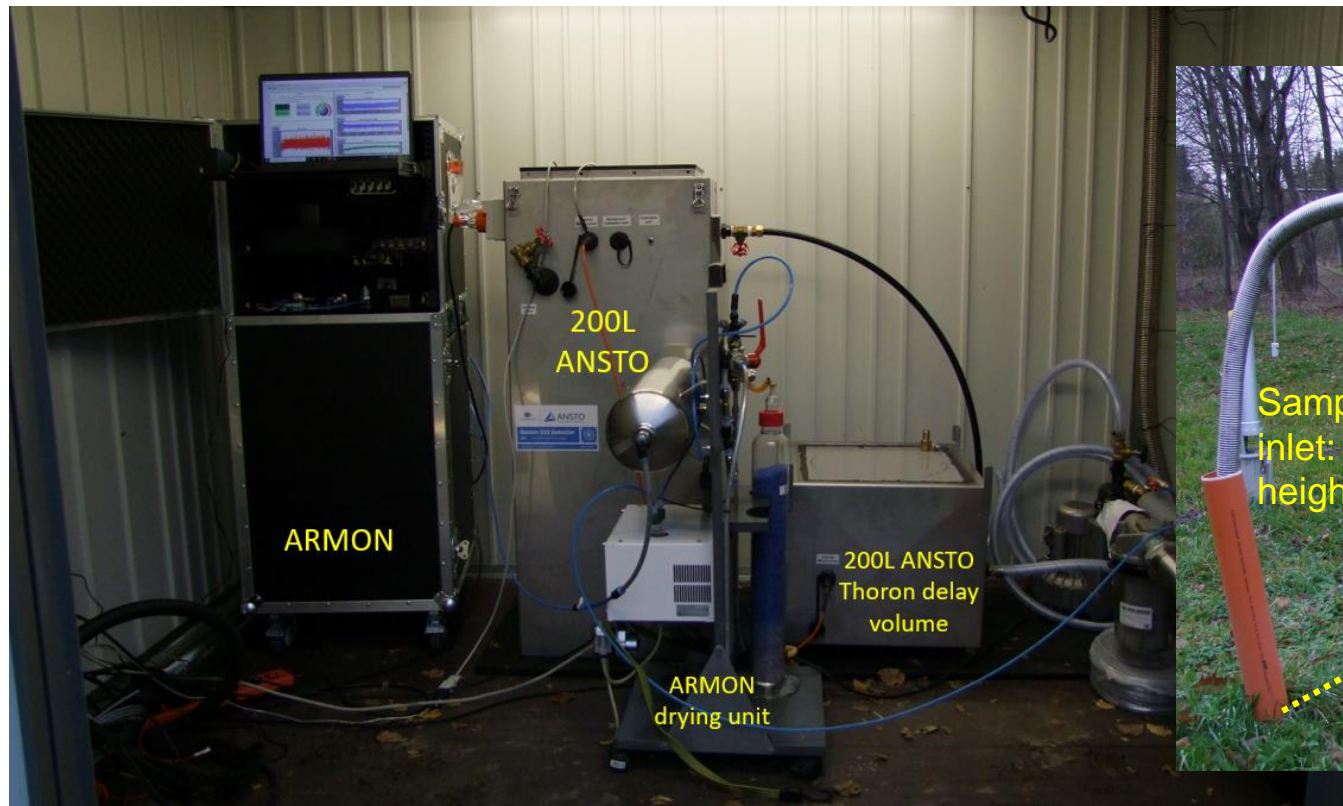
Marta Fuente

15th March 2023



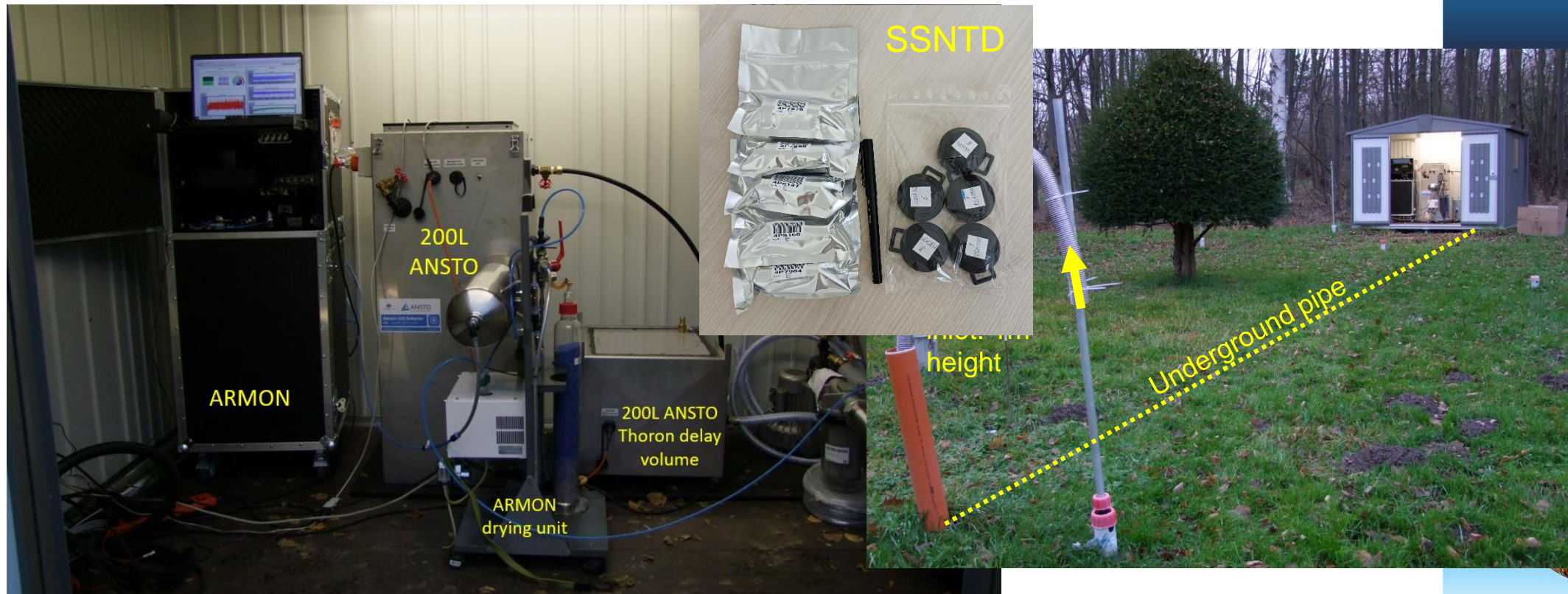
Stability comparison at PTB Braunschweig

- Participating instruments: 200L ANSTO and ARMON
- November – December 2021
- Set up: sampling at 1 m a.g.l



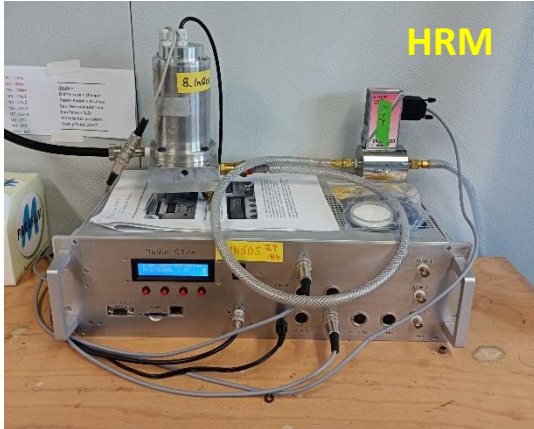
Stability comparison at PTB Braunschweig

- Participating instruments: 200L ANSTO and ARMON
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Stability and long-term comparison at SAC ICOS station

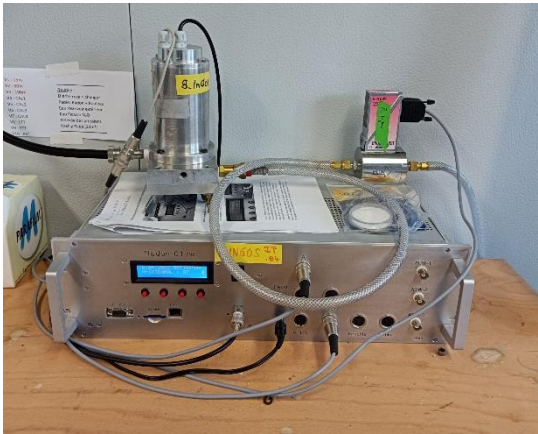
- Participating instruments: ARMON, 200L ANSTO, 1500L ANSTO and HRM
- February – September 2022
- Different set-ups



Stability and long-term comparison at SAC ICOS station

- Participating instruments: ARMON, 200L ANSTO, 1500L ANSTO and HRM
- February – April 2022

HRM



ARMON



200L ANSTO



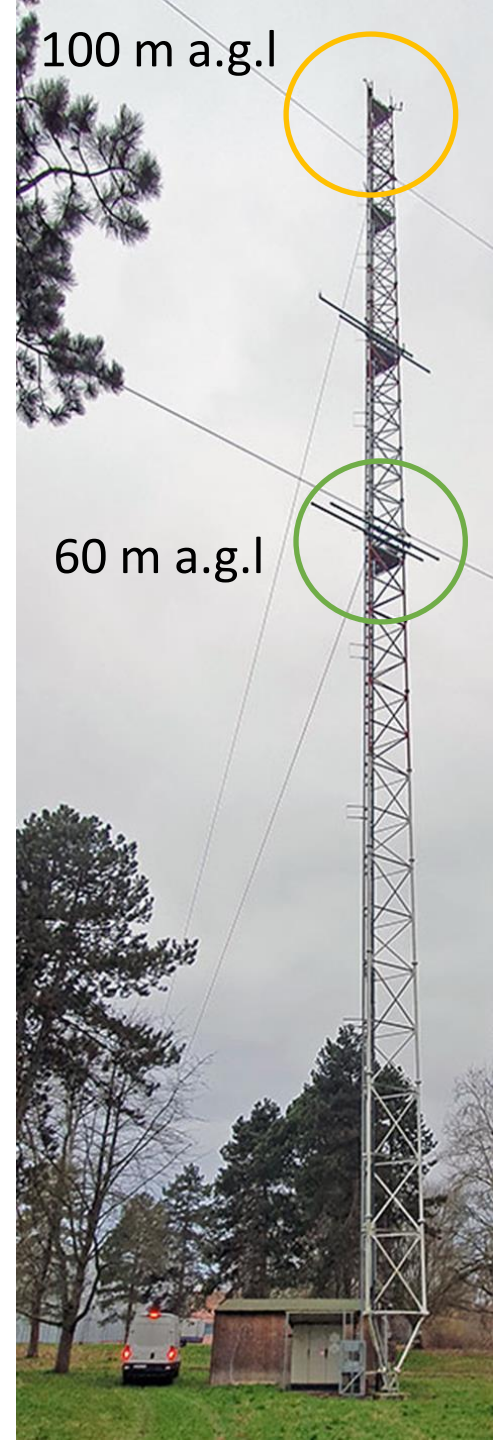
1500L ANSTO



100 m a.g.l



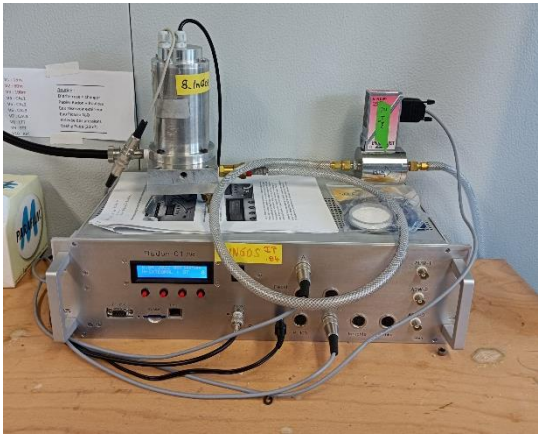
60 m a.g.l



Stability and long-term comparison at SAC ICOS station

- Participating instruments: ARMON, 200L ANSTO, 1500L ANSTO and HRM
- April – June 2022

HRM



Sharing line

ARMON



200L ANSTO



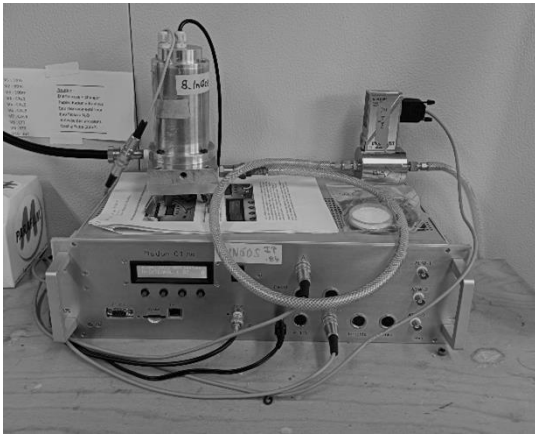
1500L ANSTO



Stability and long-term comparison at SAC ICOS station

- Participating instruments: ARMON, 200L ANSTO, 1500L ANSTO and HRM
- June – September 2022

HRM



ARMON



200L ANSTO



1500L ANSTO

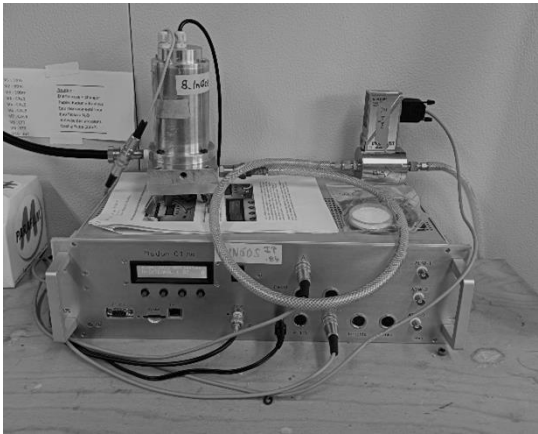


Stability and long-term comparison at SAC ICOS station

- Participating instruments: ARMON, 200L ANSTO, 1500L ANSTO and HRM
- June – September 2022

SSNTD placed at 100 m a.g.l on 26th April

HRM



100 m a.g.l



Data analysis

- Hourly data for analysis
- STP corrected data (20 degrees, 1000hPa)
- Response time correction for ANSTO instruments
- Calibration of ARMON and 200L ANSTO at PTB
- Uncertainty budget defined
- GHG data available for analysis at SAC

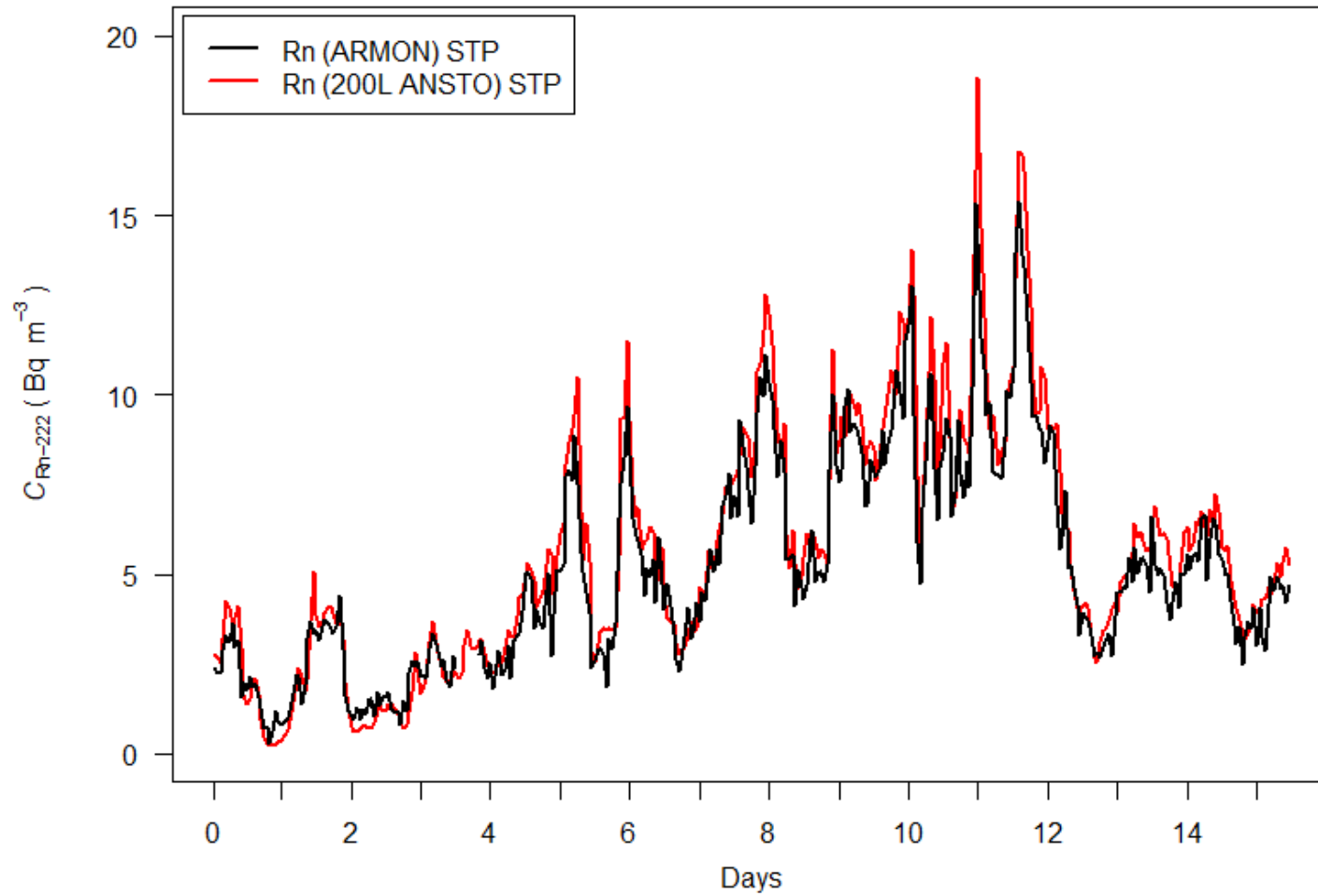


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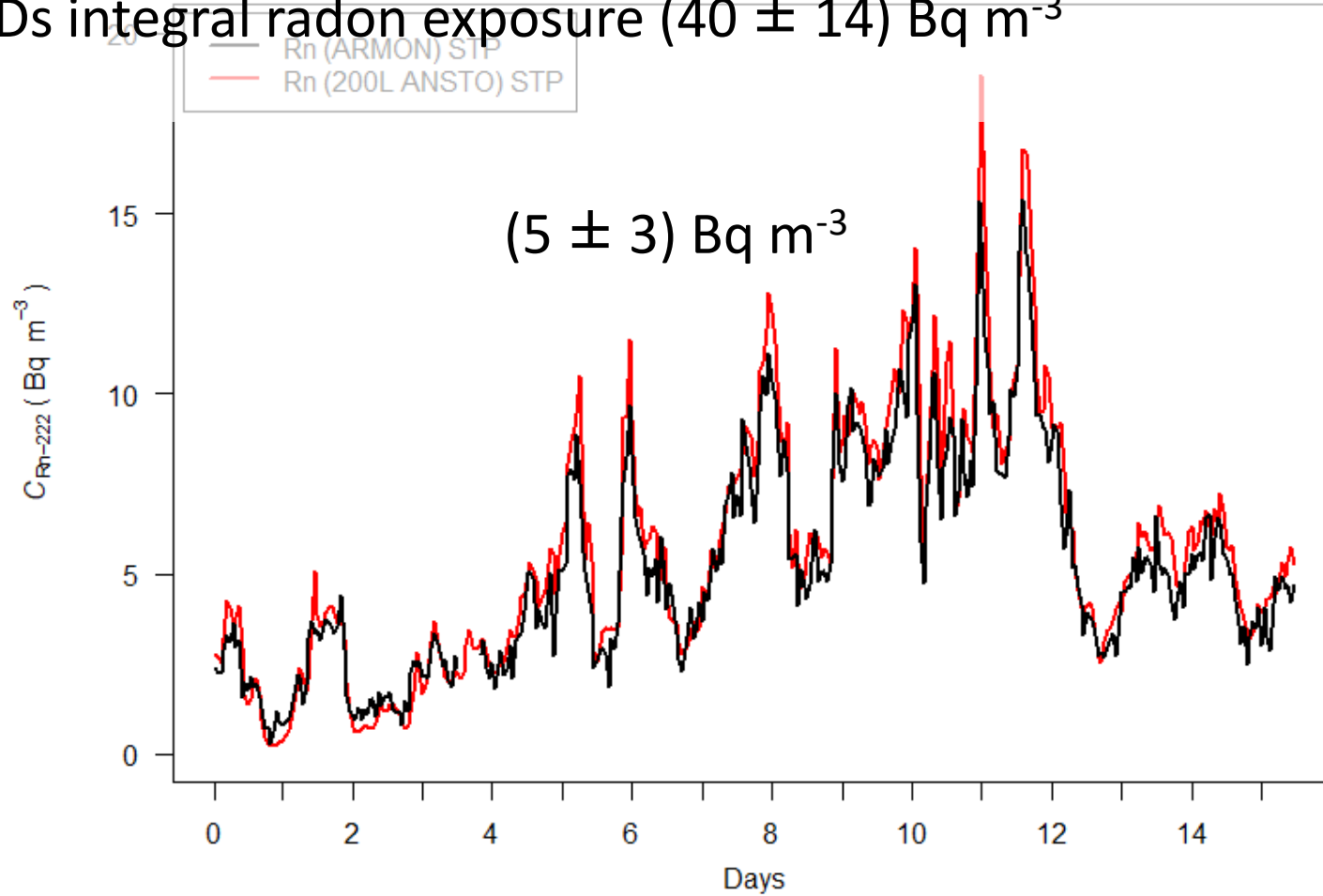


Preliminary results stability comparison at PTB

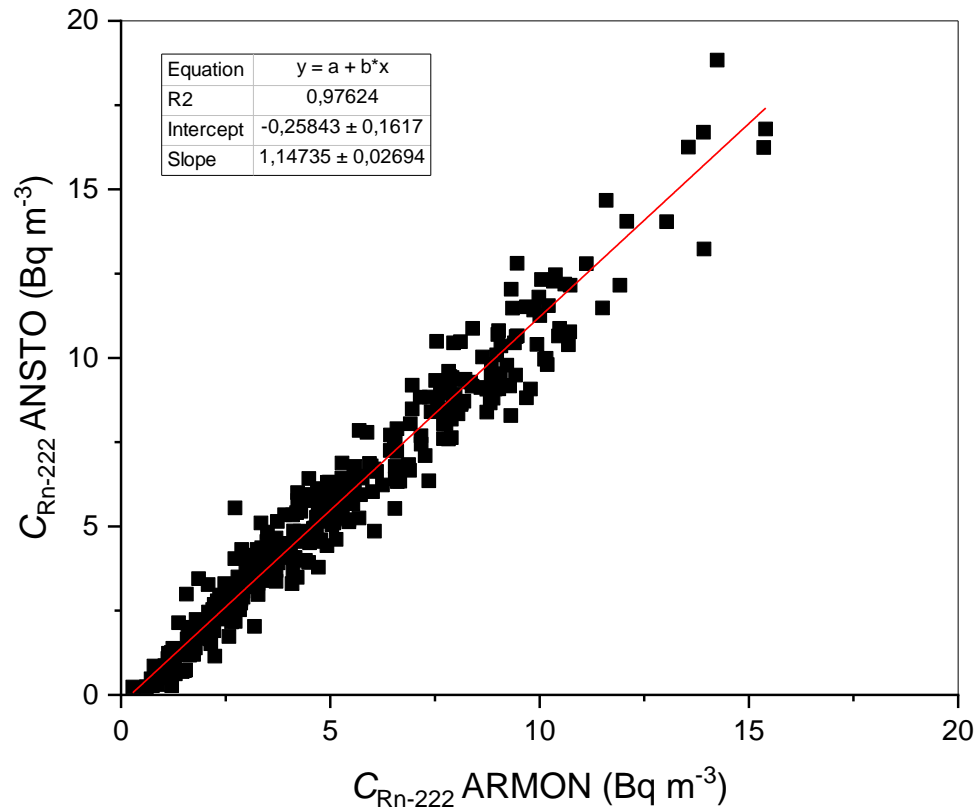


Preliminary results stability comparison at PTB

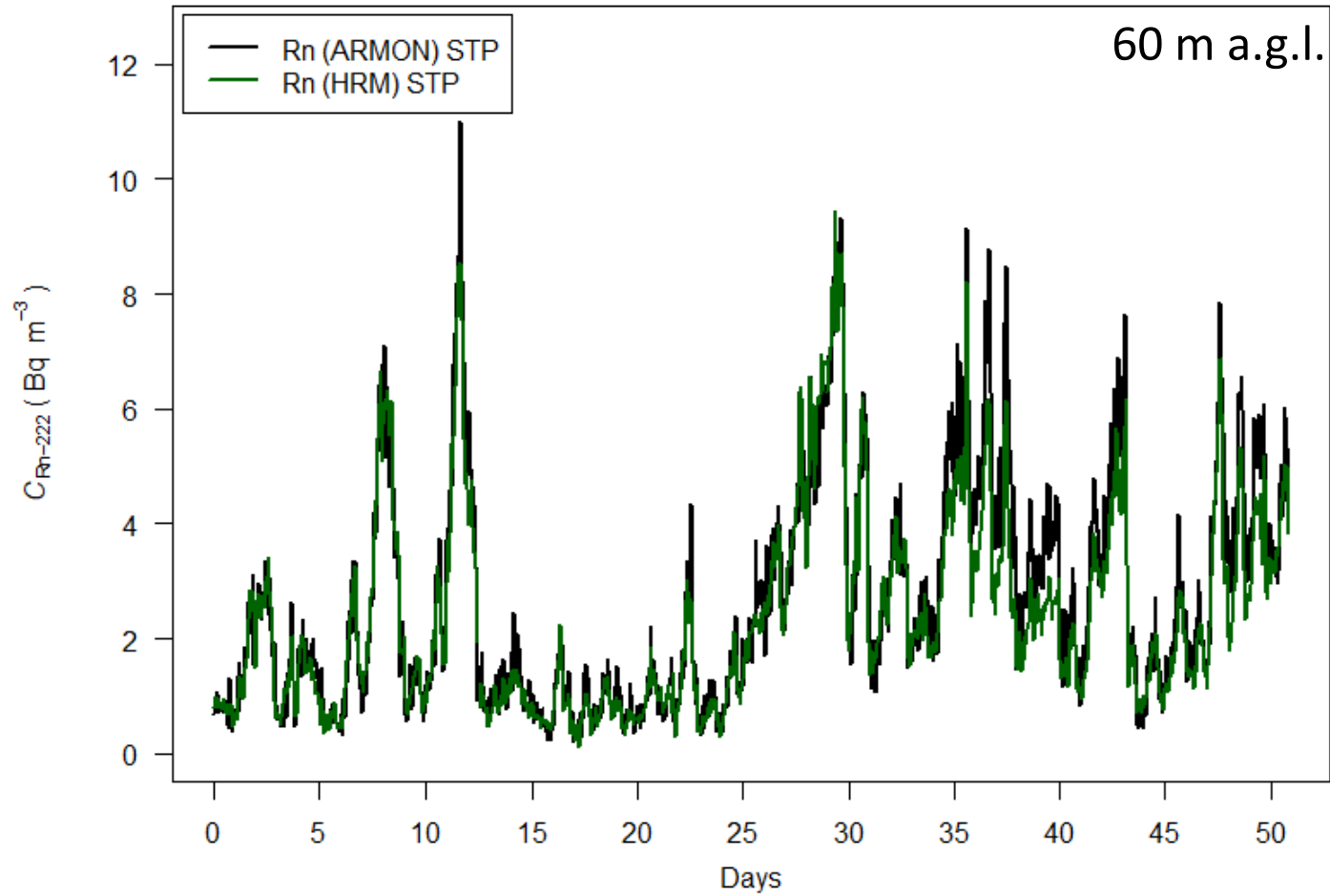
- SSNTDs integral radon exposure (40 ± 14) Bq m⁻³



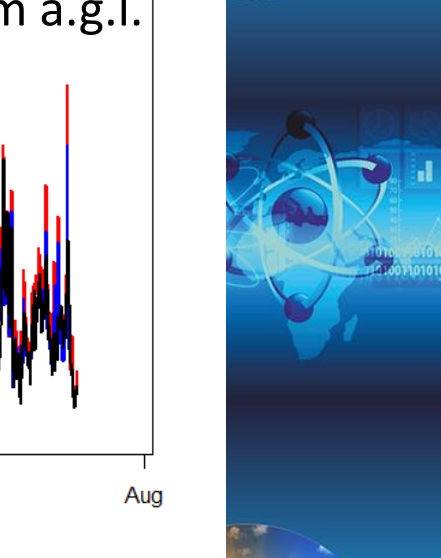
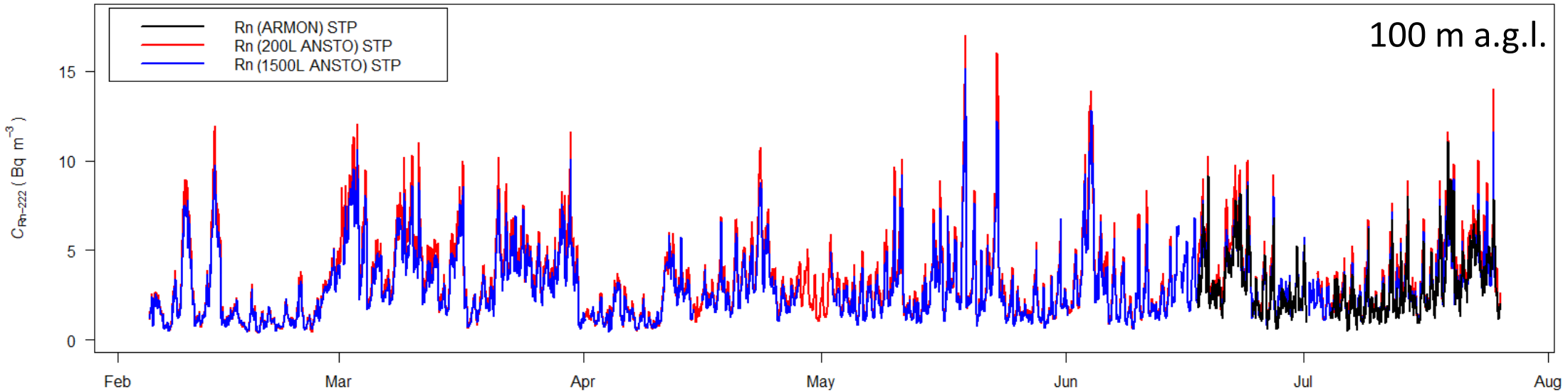
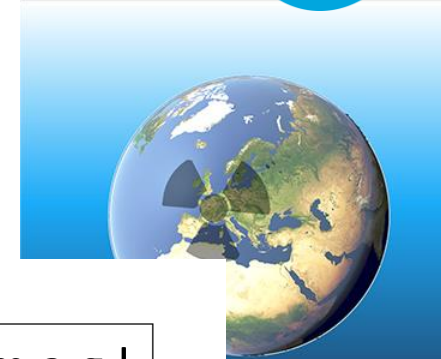
Preliminary results stability comparison at PTB



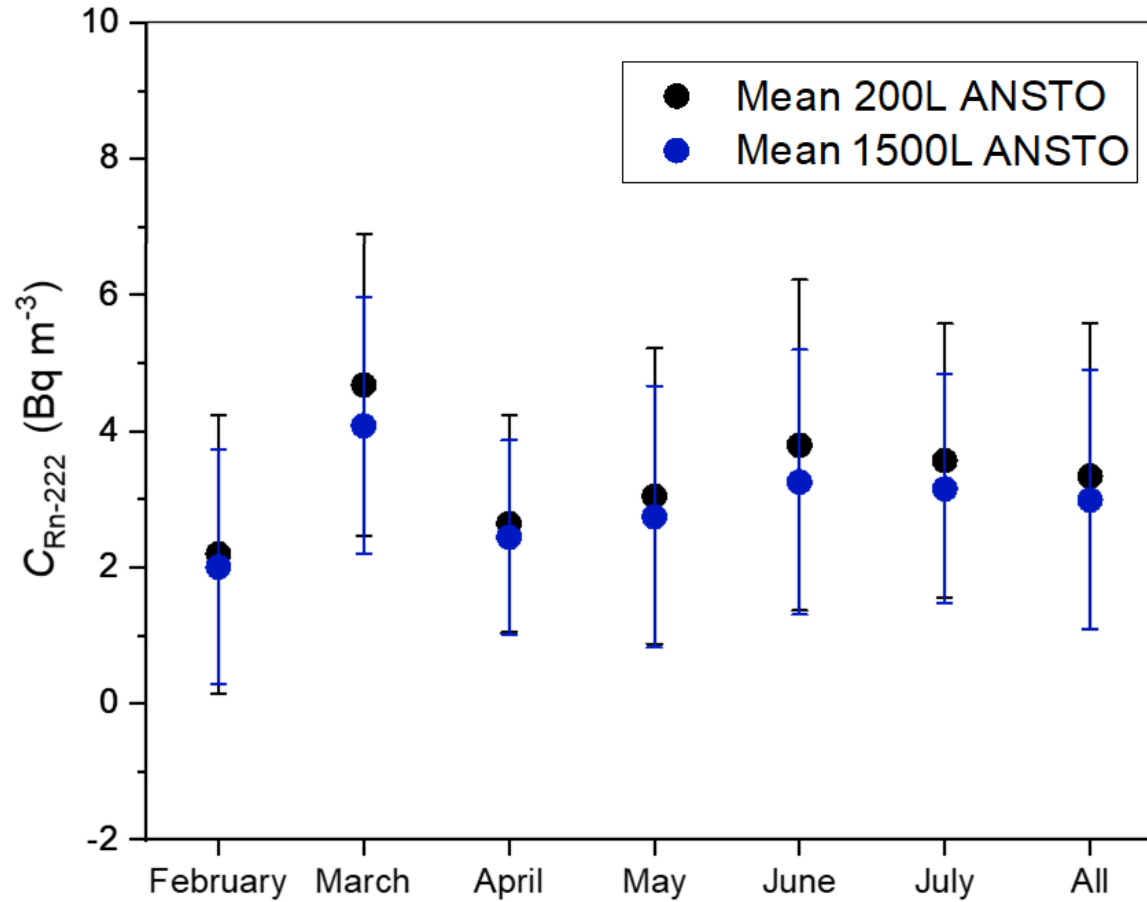
Preliminary results intercomparison at SAC



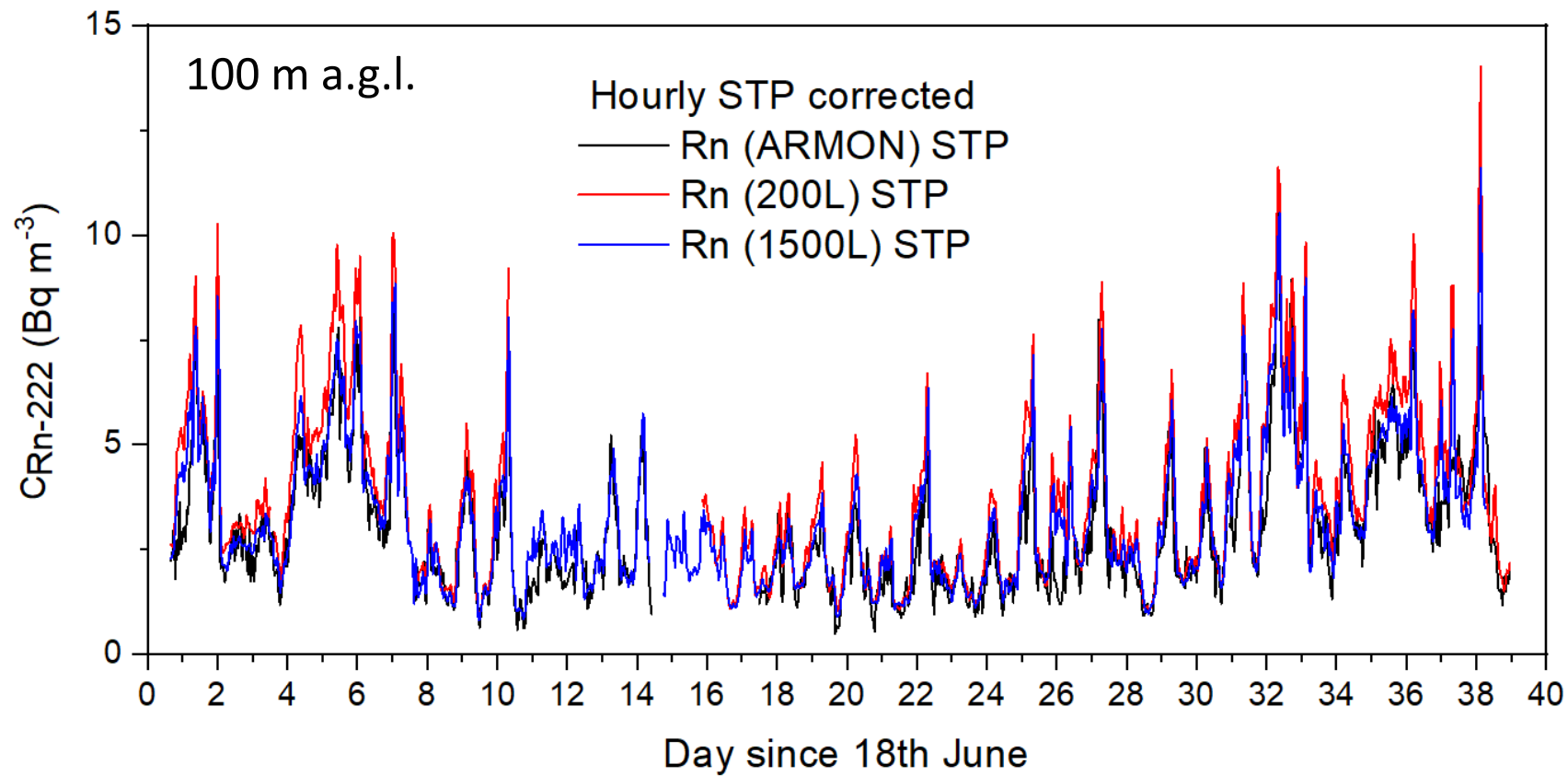
Preliminary results intercomparison at SAC



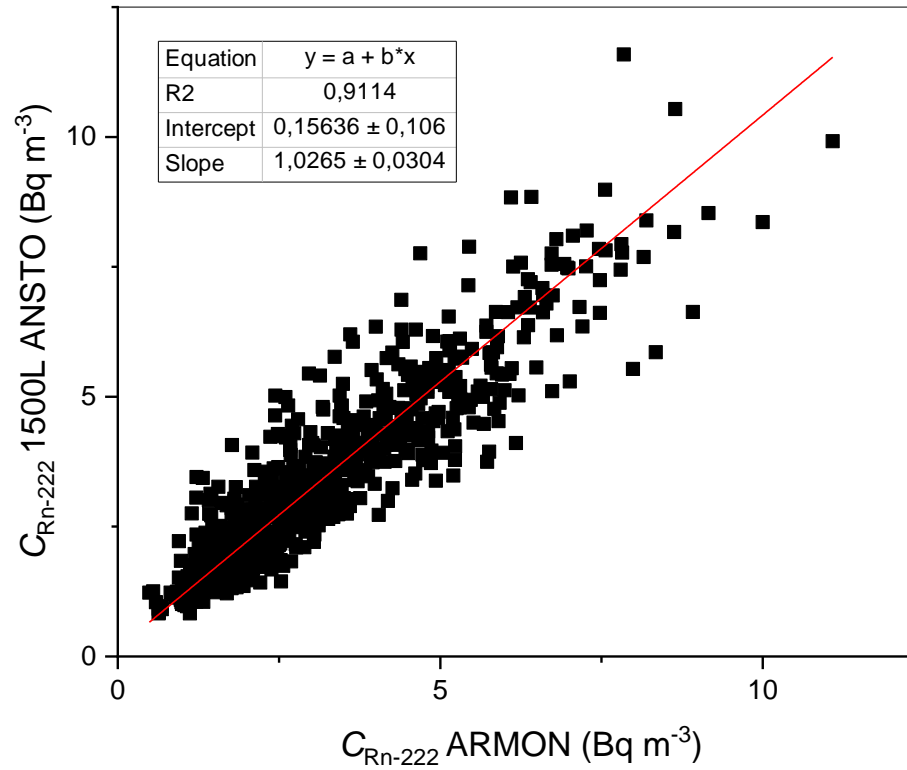
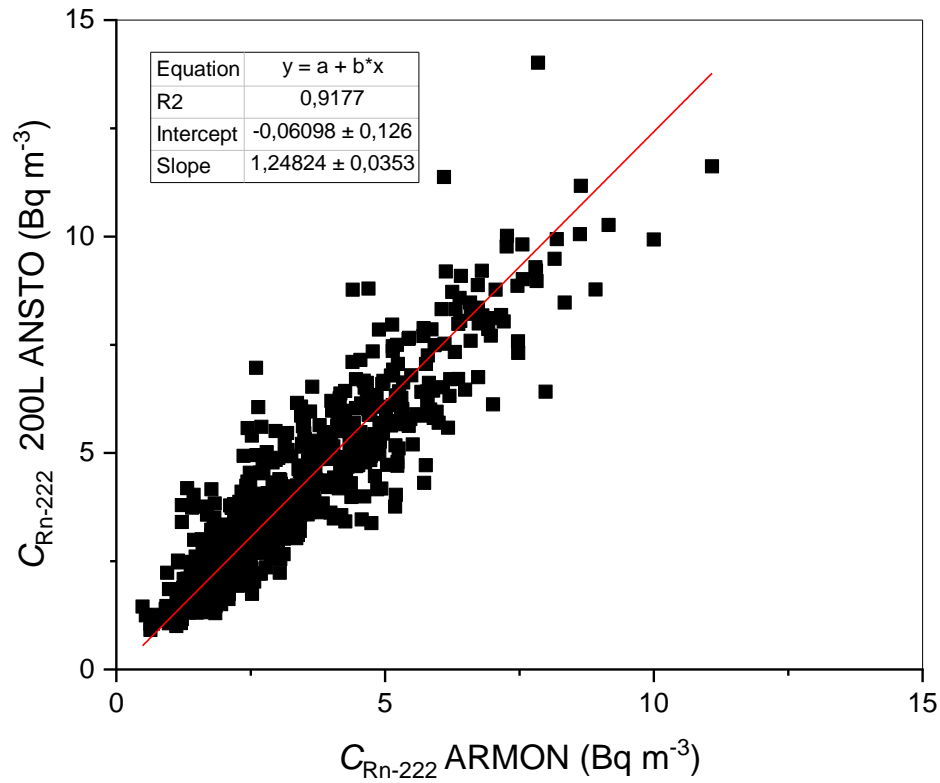
Preliminary results intercomparison at SAC



Preliminary results intercomparison at SAC



Preliminary results intercomparison at SAC





Thank you for your
attention!

