



**AFRIMETS**  
Intra-Africa Metrology System  
Système Intra-Africain de Métrologie



**TCL WG**  
**Length/dimensional feedback**  
**July 2022**

**O Kruger**



# TCL Meeting

There was no TCL Meeting this year

The meeting, is planned to be held with other activities in AFRIMETS. Planned to have it in person meeting. Currently planned to have with the Laser workshop.

The activities during the year focused on:

- CIPM MRA through
  - Comparisons
  - CMCs
- Capacity building through training and R&D/establishing facilities



# Length Comparisons for 2020 - 22

## •Comparisons currently running and planned:

- 1) **AFRIMETS LK 1:** End Standards, gauge blocks by interferometry – NMISA Pilot
- 2) **AFRIMETS LS 1:** End standards, gauge blocks by mechanical measurement – NIS to pilot.

- 3) **AFRIMETS LS 5:** Hand-held measuring instruments – NIS pilot is nearing completion of circulation

Artifacts:

External Micrometer 0-25 mm; DTI: 0-25mm; Caliper: 0-150 mm

Optional: Micrometer setting rods; Feeler Gauges; Pin Gauges

13 NMIs participating

- 4) **SADCMET LS 5:** Hand-held measuring instruments – 4 NMI pilot labs

Artifacts:

Micrometer: 0-25 mm, 50-75 mm; Caliper: 0-150 mm, 0-500 mm; Tape: 30 m; DTI: 0-25mm

9 NMIs participating



# Training

From various organisations

<b>Technical training</b>			
Lasers and laser interferometers			
Basic length			
Gauge block by interferometry		■	
Level calibrations, angle	■		
Long distance base line, including GPS.		■	
Length bars/long serious slip gauges			
<b>Other training</b>			
CMC submission		■	
Pilot of comparisons	■		■



# Capacity Building projects PTB sponsored

- Laser workshop, combined with calibration of EDMs; Due to COVID the physical workshop not yet held. Had a 2-day online theoretical workshop in March 2022. Physical workshop planned for Feb 2023.



- Additive Manufacturing (3D printing) project; Suppling of printers for 6 NMIs – Printers delivered to the NMIs, commissioned and training supplied.



- Macroscale together with AFRIMETS TCL and CCL WG, was supposed to be in 2020. Due to COVID moved to 2025



# Capacity Building projects

## PTB sponsored

- Tape Tunnel project; design, building and training for two Tape Tunnels Afrimets NMIs (KEBS, TBS) – Design stage



- Angle calibrations/Level – Planned



The end

