

TCL- Length/dimensional feedback 2011 O Kruger





From 2010

- •Discussed CCL working group structure. In which working group will AFRIMETS be active ie (working group CMC's ect)
- •Questionnaire to be drawn up and distributed through AFRIMETS
- •Draft a comparison schedule.
- •Input into CCL working group strategy from AFRIMETS perspective
- CMC reviews





Length highlights

Comparisons.

SADCMET LS 1, Gauge blocks

SADCMET LS 7, Line standard, Steel Rule

SADCMET LS 11, Two external micrometers and two length

setting pieces

Comparisons delayed in various countries. Only four NMIs completed measuremments in previous year.

AFRIMETS LS 1(UN sponsored), Artefacts ordered end of last year but not yet received. Grade gauge blocks required is not of the self item.





Length comparisons

Number AFRIMETS comparisons

Afrimet-LS1, 2010 Gauge blocks, up to 100 mm

Afrimet-LS7, 2011 Line scales up to 500 mm

Afrimet-LS? Dial indicator

SADCMET comparisons

SADC-LS 1 Gauge blocks, up to 100 mm

SADC-LS 7 Line scale, 1 m rule

SADC-LS 11 External micrometer, 0-25 mm &25mm-50 mm

and two microemeter setting pieces





Length activities for 2011

- •CMC review panel Will use NIS to assist with reviews. Build expertise register
- •Web site for working groups to include:
 - Training facilities available
 - Comparison data base
 - Research projects
 - Expertise register





Length working group Roadmap

- Assist firstly NIS to become CCL member, must first become associate member
- Assist Countries entering CMC in database
- Sponsorship
- Attendance
- Training:

Laser distance measuring systems

Gauge block interferometry

Pilot lab for comparisons

•R&D projects:

Tape calibrations

Level calibrations

Theodolite calibration-volume/surveyor

Phase shifting interferometry

True North calibrations

Trends in Length metrology

Projects in AFRIMETS Length/Dimensional Primary Standards Industry Standards Range **Basic** Gap Gap Laser distance nm inter AFRIMETS LS 1 Gauge blocks Gauge block by SADC LS 1 interferometry/ Gauge blocks SADC LS 11 Ext Phase shifting μm micrometer AFRIMETS LS 7 Line std SADC LS 7 Line mm std steel rule Level Theodolite/ angle m True north Gap Level km R&D Projects Comparisons