Standardized frequencies Fn-method of RAO Lindenberg
(GUAN/GEWEX reference site)


2. Independent from manufacturer calibration method with alternative ideology.


4. Key point – frequency during heating represents 0 %RH. Difference between frequencies during measuring and heating phase divided by difference between frequencies at 100% and 0% at normal condition is proportional to relative humidity.

5. Individual basic calibration is performed against saturated salt solutions, 0 and 100 %RH. Temperature dependent correction (so called Fn-matrix) is developed from simulation chamber experience as universal function.

6. Pre-flight procedure – 100%RH calibration point.

7. Since July 1999 – weakly twin flight with operational sonde (RS80A and later RS92).

8. Method was proved to be reasonable enough to derive realistic temperature-dependent correction and validate time-lag correction for RS80A as well as to identify different problems of RS90/RS92 routine humidity measurements to give valuable feedback to the manufacturer.