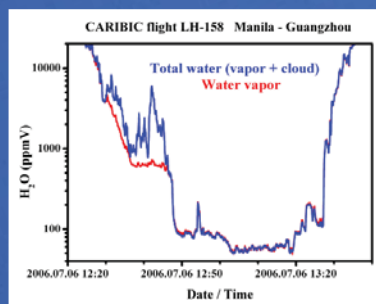
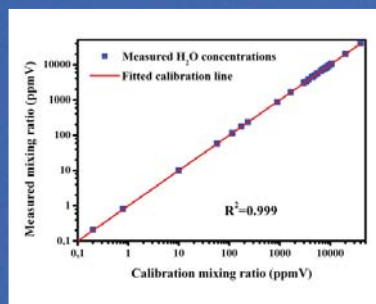
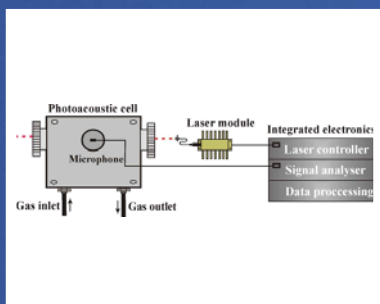


- For improving meteorological forecasts
- For trajectory optimization
- For atmospheric and climatic research
- For area surveillance



Measuring atmospheric humidity



Hilase-Hygro

ATMOSPHERIC HUMIDITY AND TOTAL
WATER MEASURING INSTRUMENT FOR
AIRBORNE APPLICATIONS

HIGH SENSITIVITY
WIDE MEASUREMENT RANGE
SHORT RESPONSE TIME
CONTINUOUS OPERATION
SMALL SIZE
ROBUSTNESS

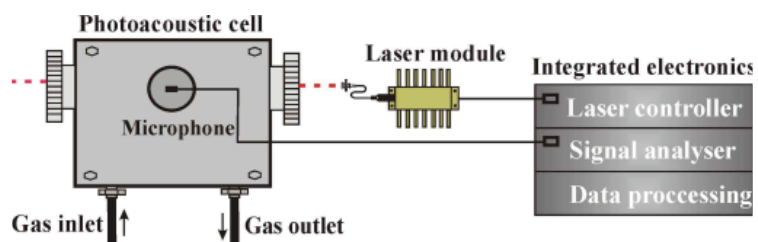
HILASE-HYGR0

WATER VAPOR CONCENTRATION MONITORING INSTRUMENT FOR AIRBORNE APPLICATIONS



Hilase offers atmospheric humidity measuring instruments which have proven reliability, ruggedness and operational lifetime exceeding ten years. Each component of a Hilase-Hygro instrument is carefully optimised to meet the very high standards for airborne applications. The instrument can withstand severe mechanical vibrations and environmental noises. The small-sized detection cell has high immunity against contaminations. In the vast majority of cases a Hilase-Hygro instrument requires no maintenance.

The operation of Hilase-Hygro is based on the photoacoustic method, which ensures **concentration measurement in an extremely wide range**. Due to the small size of the detection cell the instrument has a **short response time**, while the **excellent selectivity** of the method is ensured by the use of a narrow line-width telecommunication type diode laser light source.



A specially designed Hilase-Hygro instrument is also offered which **measures the concentration of water vapour and total water simultaneously** and with which further information about the atmosphere can be obtained. A Hilase-Hygro instrument of this type is in operation onboard of a passenger aircraft within **the CARIBIC project since 2002**.

Besides atmospheric humidity measurements, photoacoustic instruments of Hilase already found their application at various fields including **quality control of natural gas at offshore platforms**, gas permeability measurements on polymer samples, measurements on atmospheric aerosols etc.

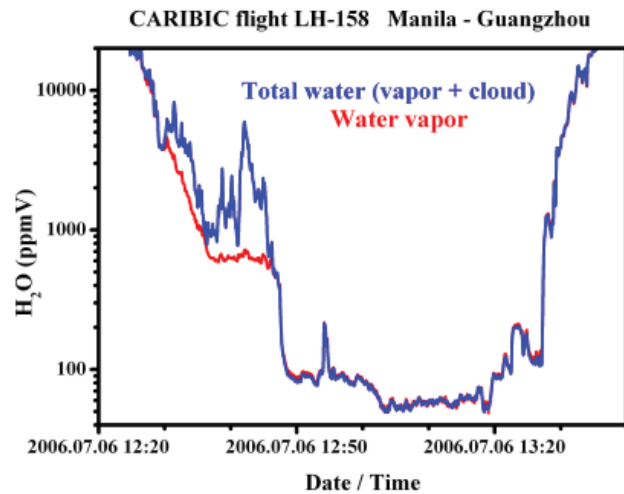
Hilase is certified by SGS UK to meet the requirements of **ISO 9001:2008** and **AS 9100**.

Hilase belongs to the Videoton Group. Videoton is the 23rd most considerable EMS (Electronic Manufacturing Services) company in the world.

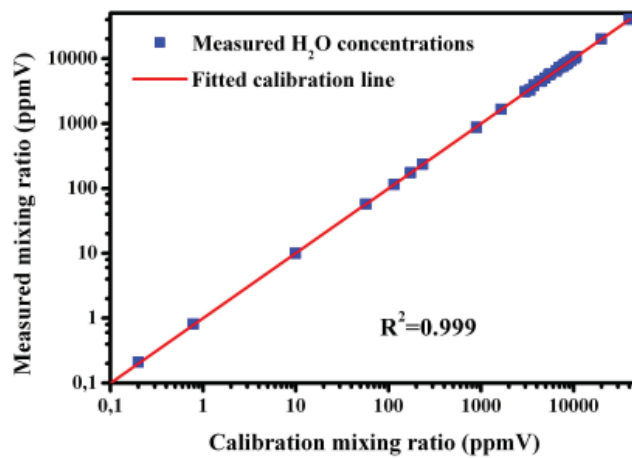
INSTRUMENT PERFORMANCE:

Dynamic range:	Response time:	Accuracy:	long term stability
0,5-50000ppm	1s	± 0,1 ppmV at low concentration ± 1% AR at high concentration	±0,2% AR/year

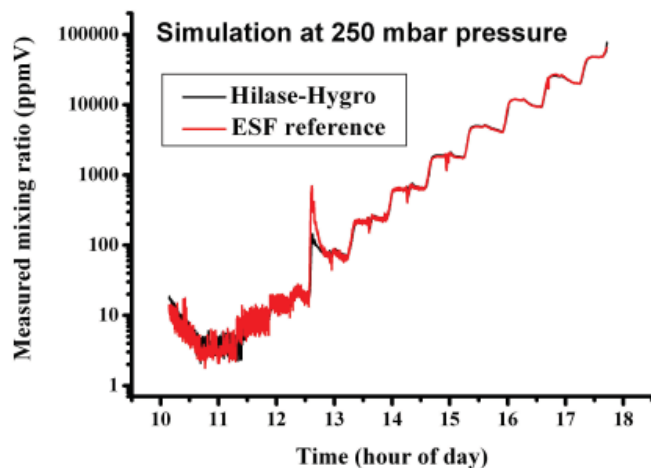
Result of a water vapor and total water measurement by a Hilase-Hygro instrument during a flight within the CARIBIC project.



Calibration of a Hilase-Hygro instrument demonstrating its wide measurement range.



Result of a simulation chamber measurement with Hilase-Hygro demonstrating its fast response time and high accuracy.



SELECTED REFERENCES

ATMOSPHERIC SIMULATION EXPERIMENT

The performance of the Hilase-Hygro instrument was tested at various places including the atmospheric simulation chamber of the Institute for Energy and Climate Research: Troposphere (IEK-8) Research Center Jülich (Germany).



AIRBORNE OPERATION OF A HILASE-HYGRO INSTRUMENT WITHIN THE CARIBIC PROJECT

A Hilase-Hygro instrument, combined with a frost point hygrometer reference instrument, is in operation on-board within the CARIBIC project since 2002.




HILASE
*Developing, Producing, Servicing
and Trading Limited Company*

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