



INTERFEROMETRIC INVERSION WITH UNRESTRICTED SAMPLING

*Innovative interferogram acquisition, processing and optimisation process
with irregular sampling*

Technological benefits

An optimum sampling system

Acquisition of fewer samples

No interferogram sampling constraints for spectral reconstruction (Shannon, Nyquist)

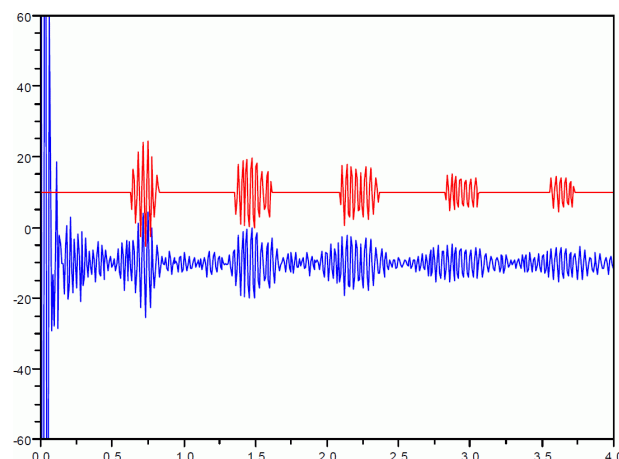
Higher performances than conventional approach:

- greater sensitivity with low signal-to-noise ratio
- better time resolution
- no spurious signals

Simple and innovative design

Simplified and more compact spectrometer

Less data to be processed and/or transmitted



Complete interferogram (blue) and optimised
irregular partial interferogram (red)

Invention overview

Process enabling direct processing of information contained in an interferogram, without spectrum reconstruction.

Interferometer sampling is optimised for a given application.

Commercial benefits

A simple, powerful device

Compact instrument

Fast measurement

Smaller volume of data to be processed at equivalent resolution

Potential applications

Remote sensing of periodic-line atmospheric gases

Greenhouse gas (CO₂), pollutants (CO), etc.

Infrared spectroscopy in laboratory

IR spectroscopes for biology and chemistry

Patented invention, available under license