

BOMEM Incorporated

Fourier Transform Spectrophotometers are the highest performance infrared spectrophotometers commercially available today. BOMEM, incorporated in 1973, has gained the happy reputation of producing the highest performance FTIR Systems. Since introduction of our laboratory models in 1980, the companies annual sales have quadrupled. The company uses extensive local subcontracting in production of basic parts and employs a staff of 35, fourteen of which are actively involved in engineering development of improved versions of our spectrophotometers and in contracted R&D projects. Marketing world-wide with the help of representatives in all European countries, Japan and Australia our export sales account for 75% of production.

The BOMEM DA3 Series represents a new class of high performance FTIR spectrophotometers - a complete modular system which reflects the latest advances in spectroscopy and data processing technology. An innovative approach to alignment of the interferometer, termed Dynamic Alignment, forms the basis from which many system advantages are derived:

- accurate band and line shapes and high sensitivity
- wide spectral bandwidth, covering the region of 10 cm^{-1} thru 45000 cm^{-1} ($1000 \mu\text{m}$ to $.22 \mu\text{m}$)
- accurate longterm reproducibility of spectra
- high resolution, up to 0.0024 cm^{-1} or resolving power of 1×10^6
- immunity to temperature and vibration
- rapid system deployment.

Data processing, storage and communication functions are performed by a High Speed Vector Processor (HSVPS) and a Host Computer system. We designed the HSVPS to take full advantage of the performance features of the dynamically aligned interferometer. It performs data acquisition, numerical signal processing and fourier transformation. The system is particularly designed for FTIR applications, providing FORMAN phase correction, numerical filtering and both FFT and

DFT fourier transforms. It can perform coaddition of up to 240,000 interferogram points. We usually supply the DA3 series systems with a Digital Equipment Corp. PDP11/23 computer. It provides a reliable general purpose laboratory computer which links to our system by the standard IEEE-488 General Purpose Interface Bus. The host computer is used for data storage (20Mbytes) and for data analysis routines including all standard stored-ratio methods and also provides for spectral search, peakfind, spectral subtract, baseline correction, and spectral integration.

Results are displayed on a 12" graphics terminal and camera-ready copy may be generated on the high speed digital plotter supplied.

As mentioned previously, we maintain a competent staff of engineers, programmers and optical design draughtsmen which can respond to special customer requirements. Please call us to discuss your specific application.

BOMEM INCORPORATED

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President

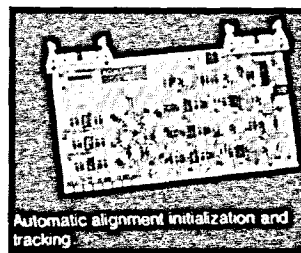
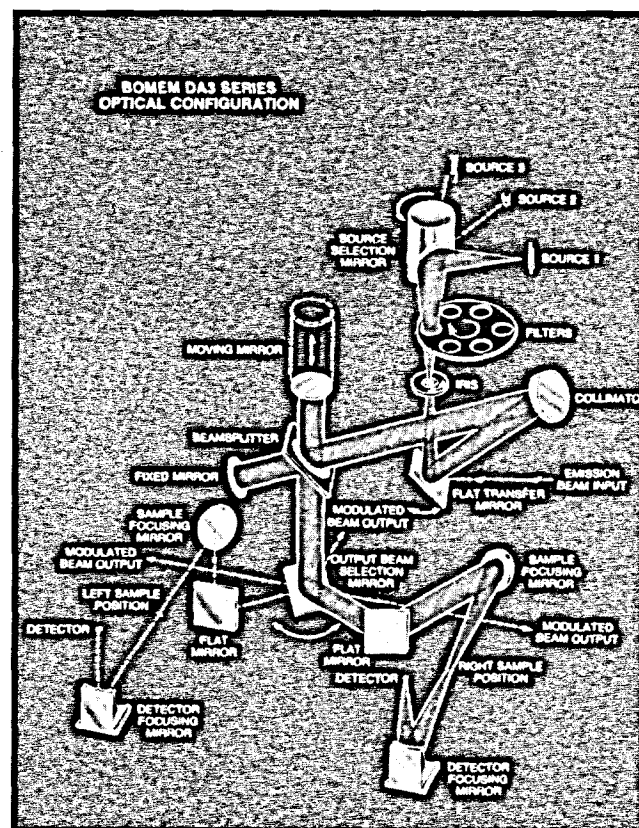
Dr. Henry L. Buijs

General Manager

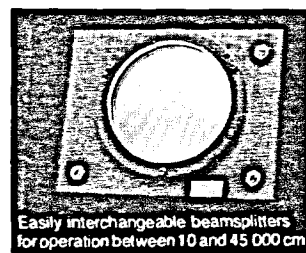
Garry Vail

Engineering Manager

Jean Noel Bérubé



Automatic alignment initialization and tracking



Easily interchangeable beamsplitters for operation between 10 and 45 000 cm^{-1}