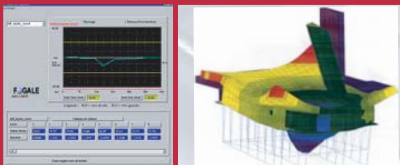
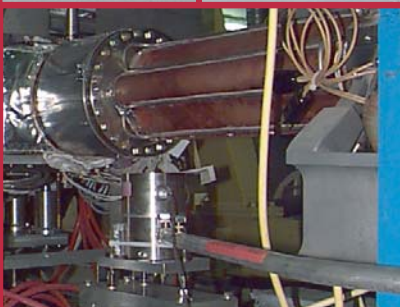
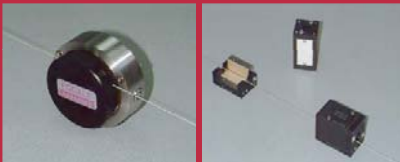


# Technology for Accelerator Alignment

SENSORS FOR ALIGNMENT POSITION DIAGNOSTIC DETECTION AUSCULTATION



## 15 years experience in innovative solutions & sensors for accelerator alignment

### ▶ Digital HLS Hydrostatic Leveling System

*High accuracy level measurement with metrological reference: liquid free surface*

Measurement range: 2.5 mm, 5 mm, 10 mm, 15 mm

Repeatability: < 0.5  $\mu\text{m}$

Resolution:  $\pm 0.01 \mu\text{m}$  at 0.01 Hz

Linearity error:  $\pm 0.4 \mu\text{m}$

Bandwidth: 10 Hz

Long term stability: < 10  $\mu\text{m}$  / year

Radiation resistant: > 100 Mrad

### ▶ Digital WPS Wire Positioning System

*High accuracy ecartometer measurement with stretched wire as metrological reference*

Two types of sensors:

▶ WPS-1: Measurement along one axis (standard range: 2.5 mm)

▶ WPS-2D: Measurement along one axis (standard range: 2.5 mm)

Measurement range: 10  $\times$  10 mm

Repeatability: < 1  $\mu\text{m}$

Resolution: 0.1  $\mu\text{m}$  peak to peak at 1 Hz

Linearity error:  $\pm 0.4 \mu\text{m}$

Bandwidth: 10 Hz

Long term stability: < 10<sup>-3</sup> / year

Radiation resistant: > 100 Mrad

### ▶ Digital DOMS Dimensional Offset Measurement System

*High accuracy sensor for dimensional measurement*

Measurement range: from 1 to 10 mm

Repeatability: 10<sup>-4</sup> of measurement range

Bandwidth: 10 KHz

Long term stability: < 10<sup>-3</sup> / year

Radiation resistant: > 100 Mrad

### ▶ TMS Tilt Measuring System

*Tilt and acceleration measurement along two horizontal axes with local vertical metrological reference*

*Intensive magnetic fields and radiations*

Measurement range:  $\pm 10$  mradian

Repeatability: 10<sup>-6</sup> radian

Linearity error:  $\pm 4 \mu$  radian

Bandwidth: from 0 up to 100 Hz

### ▶ SOFT MSM Multi System Metrology

Monitors all types of measurements carried out with FOGALE nanotech instruments or other open-ended software

Possibility of development of new functionalities for particular applications

Compatible with all types of PC under Windows© NT or 2000

Possible telesurvey (customer - supplier) with modem

Module for 3D visualization (option)

Correcting module of moon / earth deformation interaction (option)

All information on our website: [www.fogale.com](http://www.fogale.com)