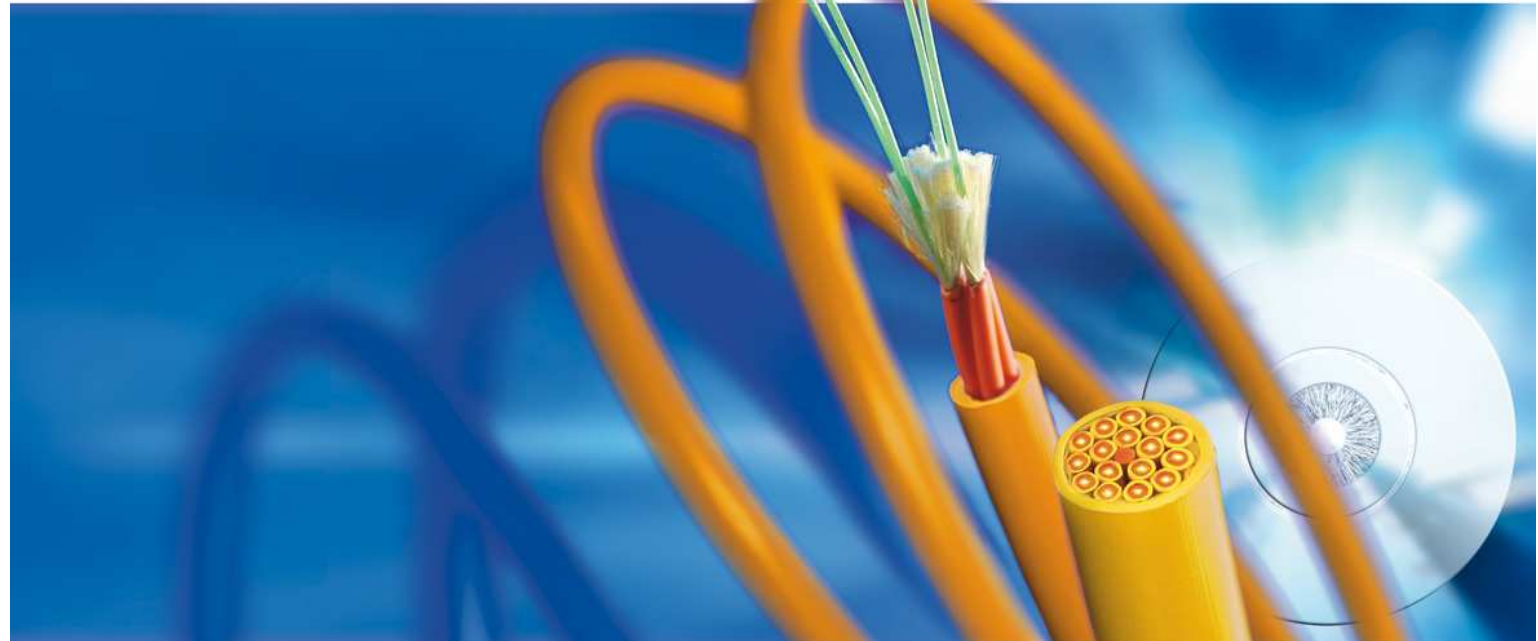


# LEONI Fiber Optics GmbH

A member of the LEONI group



LEONI Fiber Optics - Your Specialist for Fiber Optics

THE QUALITY CONNECTION

# LEONI

Wire • Cable • Wiring Systems

## SMART-1

## Optical Fiber for NIR spectrometer SIR

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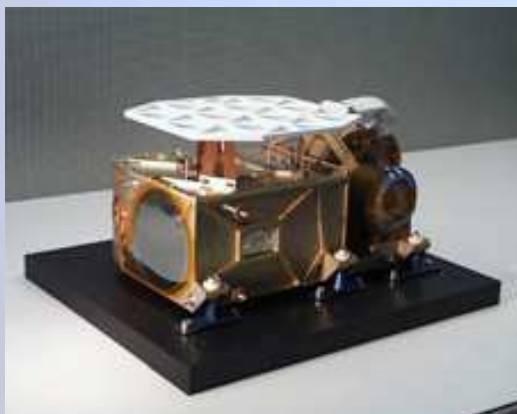
Dr. Otto Bernauer

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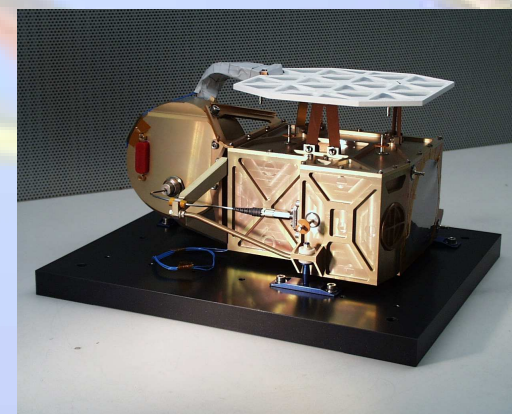
5th October 2005

## SIR

- Smart-1 Infrared Spectrometer
- disperses the reflected moonlight enabling the analysis of the lunar surface's composition
- Designed and built by Max-Planck Institute for Solar Systems Research (MPS) Kaltenburg-Lindau in collaboration with ZEISS

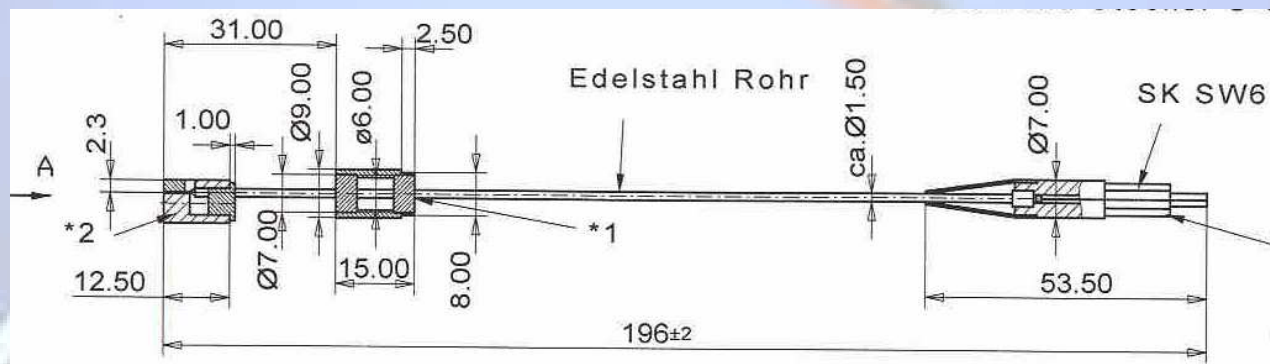


Pictures from MPS



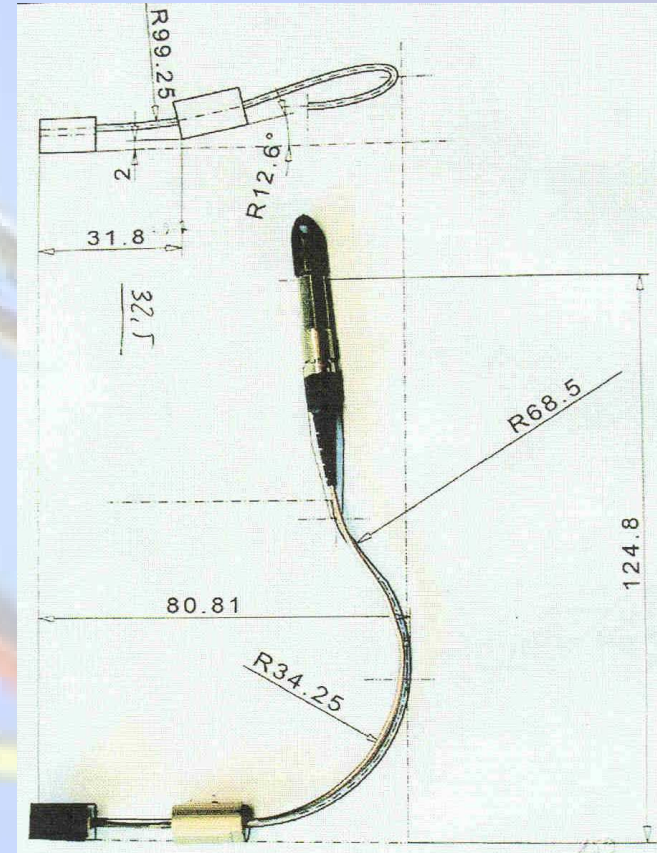
## Optical Fiber

- Fiber material: quartz for Low IR (0.9 to 2.4  $\mu\text{m}$ )
- Fiber diameter: 200/280  $\mu\text{m}$
- Buffer material: Tefzel
- stainless steel capillary



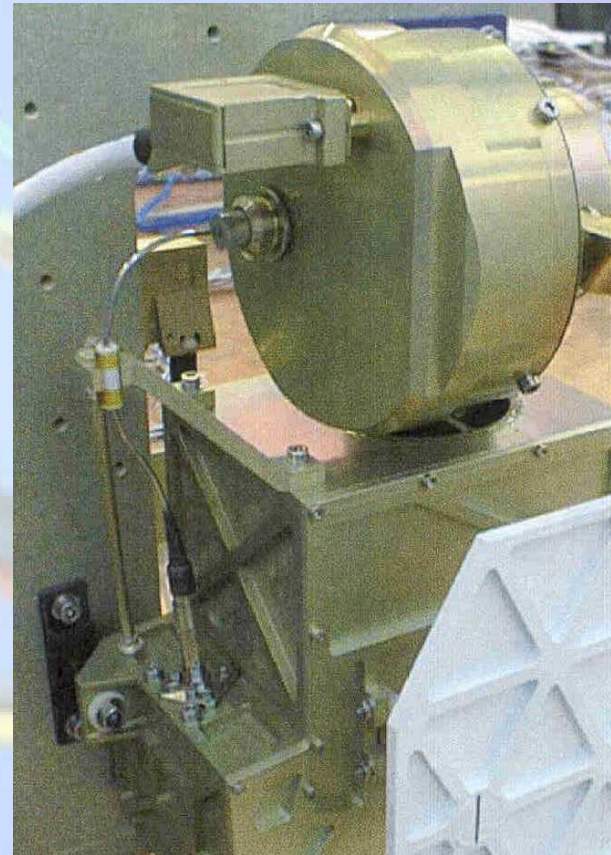
## Final Optical Fiber Assembly

- one side: connector
- other side: special fitting
- special bending diameter
- special geometry



## Final Steps

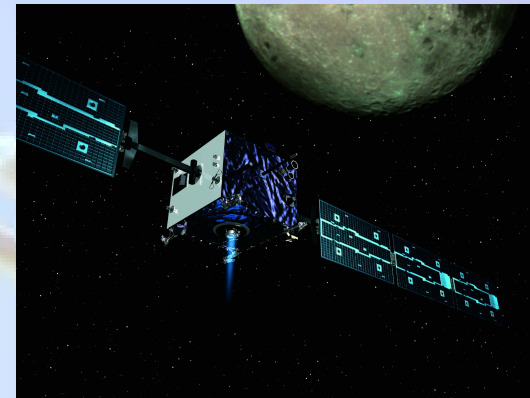
- providing several assemblies for tests
- shake tests with vibrations typical during rocket launch



## Situation

SIR is collecting data

Thank you!



SMART-1 on its way to the moon  
(picture: ESA).