

**ABSTRACT**  
=====SYNCHROTRON BEAMLINE FRONT-ENDS AND  
SURFACE SCIENCE EXPERIMENTAL STATIONS :  
DESIGN CONCEPTS AND MANUFACTURING TECHNIQUES

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After the establishment of a reliable stored beam, the next stage in the construction of a new synchrotron facility is normally the installation of the Beamline Front-Ends. The first section of the presentation will describe some of the design concepts and manufacturing techniques which can be employed in the production of such Front-Ends. This will include references to the invariable beam absorbers, multiple chamber alignment, large- vessel vacuum integrity, and quality control systems.

The second section of the presentation will describe the design philosophy of a new Angle-Resolved Ultraviolet Photoelectron Spectrometer. Reference will be made to the hemispherical analyser, multi-element lens, the angular and energy resolution capabilities, two-axis goniometer, the magnetic shielding characteristics of the vacuum vessel, and the mechanical design enabling multiple techniques.