DOWN TO EARTH

Translating Space Know-how to Healthcare

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The Open University

Exploration of our solar system pushes the boundaries of science and engineering. Our collaborative, multi-disciplinary approach has delivered successes on the international stage and is underpinned by our strong pedigree in the development of bespoke analytical and technological solutions to the customers' needs.

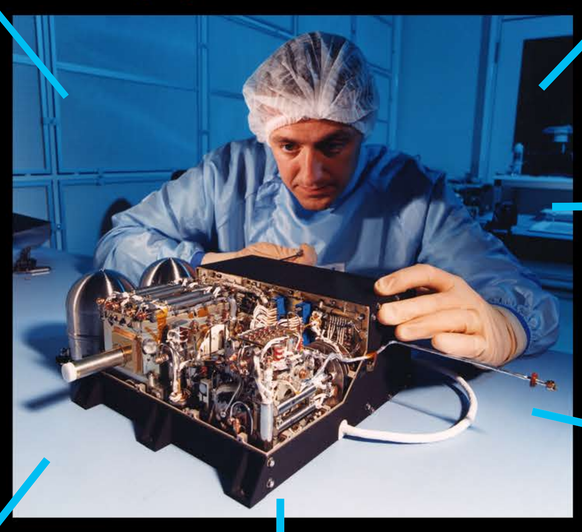
In particular, the application and development of a wide range of bespoke mass spectrometer-based systems that enable us to determine the physical, chemical and isotopic composition of extra-terrestrial materials in the laboratory (lunar and meteorite samples) and *in situ* (Cassini-Huygens, Beagle2 and Rosetta missions). Encouraged by ESA, STFC and UKSA, we have been collaborating with external partners to explore how these capabilities can be translated to terrestrial challenges. This has included the successful delivery of an award winning environmental monitoring system for the Ministry of Defence.

Healthcare is also proving a fruitful area for these capabilities. A series of collaborative studies have indicated that in addition to deployable instruments, for point-of-care applications, that the laboratory-based systems have much to offer in biomarker discovery, disease classification and target compound profiling.

Healthcare Applications

Steroid Profiling

Point of Care Disease Diagnosis



Novel Disease Classification Methods

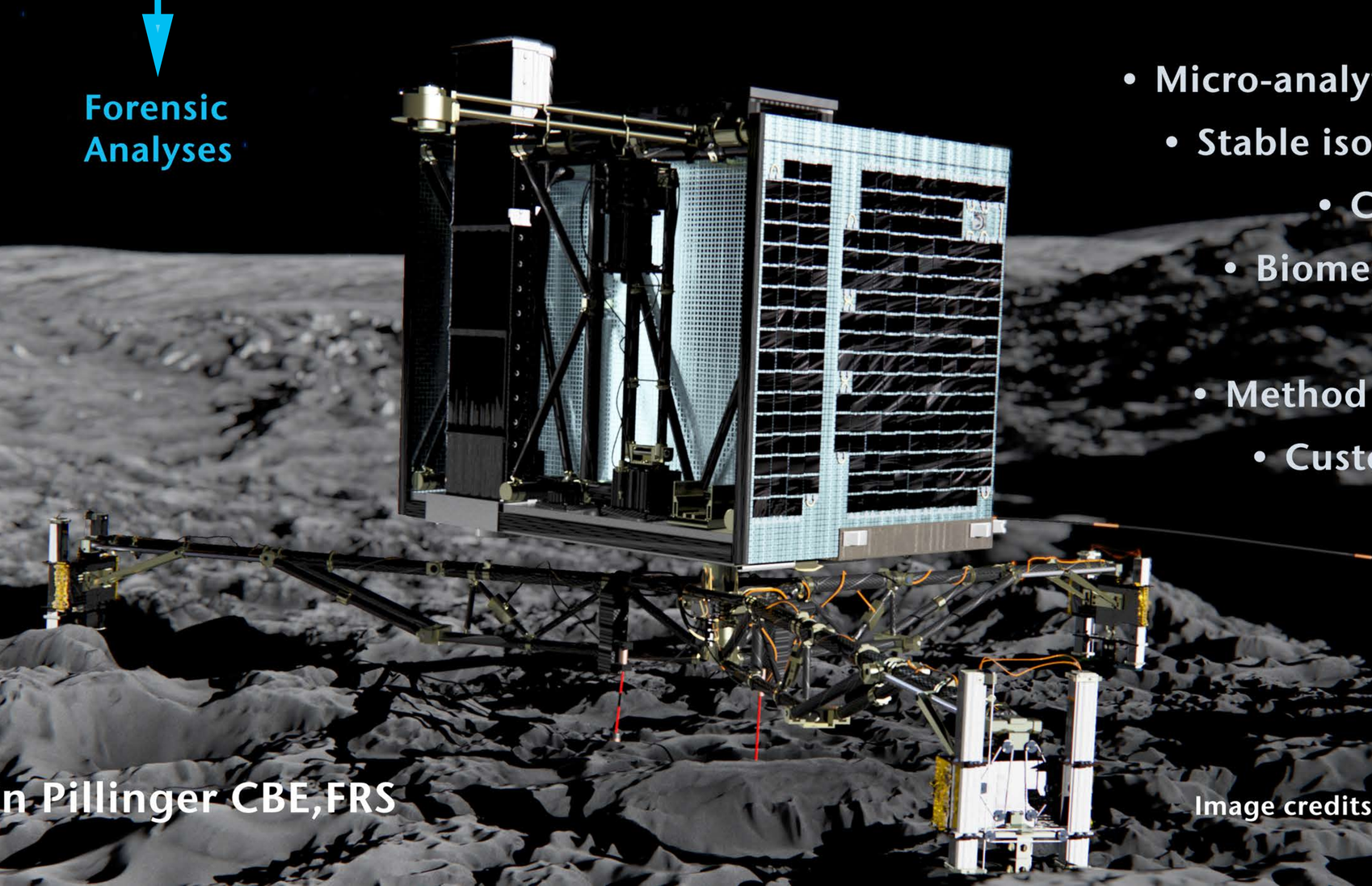
Safety Critical Atmospheric Monitoring

VOC Profiling

Forensic Analyses

Capabilities

- Multi-dimensional GCxGC-MS
- SIFT-MS
- Micro-analytical methods
- Stable isotope analyses
- CL3 laboratory
- Biomedical Electron Microscopy
- Method development
- Customer training



Dedicated to
Professor Colin Pillinger CBE,FRS

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