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A satellite for cancer diagnosis

14 March 2015 | News | By BioSpectrum Bureau

A satellite for cancer diagnosis

The digital infrared sensor from European Space Agency (ESAs) Proba-V vegetation-scanning satellite is being adapted for several non-space applications. Mounted on a standard medical scanner, the space sensor can help doctors to look deeper into human tissues for detecting skin diseases earlier.

Developed for ESA by the Belgian company Xenics, the camera has a unique wide field of view. Proba-V can detect shortwave radiation human eyes cannot detect.

"To humans, two green trees could look similar. But with this camera, we might detect that one is growing well and the other is unhealthy," explains ESA's Mr Michael Francois.

With support from ESA and the Belgian Space Technology Transfer Programme, the Xenics team created 'Machine Vision', integrating cameras on inspection systems.

"The high-speed resolution of our line-scan cameras makes them ideal for detecting hidden defects on fast-moving production lines, such as bottle manufacturing or sorting different types of plastics for recycling, all of which look similar to the human eye," explains Mr Koen van der Zanden from Xenics.