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Seeing the Sun from all angles

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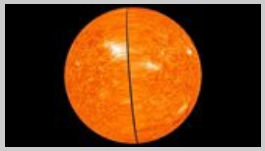

STEREO image of the Sun

University physicists and engineers, together with colleagues at the Science and Technology Facilities Council Rutherford Appleton Laboratory have developed the camera systems responsible for taking the first 360 degree view of the Sun.

The cameras have been used by NASA on their STEREO spacecraft and enhanced by their Solar Dynamics Observatory (SDO) mission which images the Sun in high resolution. As the STEREO probes fly around the far side of the Sun, the area of unseen solar territory on the near side will increase and SDO's cameras will play a vital role in filling the gap.

All the cameras now operating on STEREO were built and tested at the University. Dr Chris Eyles from the University of Birmingham's School of Physics and Astronomy whose team helped to design and build the cameras said, 'These unprecedented images can perhaps be likened to the first images of the far side of the Moon taken some 50 years ago. However, in many ways the significance for mankind is probably much greater in view of the effect that the Sun and "space weather" can potentially have on our advanced technological society. Having the ability to image the entire disk of the Sun, including the far side, will enable us to continually monitor solar active regions, sunspots, and solar flares as they rotate around the Sun and improve our understanding of solar activity and our ability to predict space weather.'

It is anticipated that these new views of the Sun will allow scientists to better predict space weather and the violent eruptions from the Sun's surface, which can damage satellites, disrupt communications and disable power systems on Earth.

Scientists have already established that the magnetic fields in the Sun's atmosphere drive solar activity on a global scale. These new views of the entire Sun as a result of the cameras built and tested at Birmingham will enable detailed studies of these processes at work.

Learn more by reading the press release in our **news site (/news/latest/2011/02/seeing-the-sun-from-all-angles.aspx)** .

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