

# **3D visualization techniques for the STEREO-mission**

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The forthcoming STEREO-mission will observe the Sun from two different view-points. We expect about 2GB data per day, which ask for suitable data presentation techniques. A key feature of STEREO is that it will provide for the first time a 3D-view of the Sun and the solar corona. In our normal environment we see objects three dimensional because the light from real 3D objects needs different travel times to our left and right eye. As a consequence we see slightly different images with our eyes, which gives us information about the depth of objects and a corresponding 3D impression. Techniques for the 3D-visualization of scientific and other data on paper, TV, computer screen, cinema etc. are well known, e.g. two colour anaglyph technique, shutter glasses, polarization filters and head-mounted displays. We discuss advantages and disadvantages of these techniques and how they can be applied to STEREO-data. The 3D-visualization techniques are not limited to visual images but can be also used to show the reconstructed coronal magnetic field and energy and helicity distribution. In the advent of STEREO we test the method with data from SOHO, which provides us different viewpoints by the solar rotation. This restricts the analysis to structures which remain stationary for several days. Real STEREO-data will not be affected by these limitations, however.