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NEWS RELEASE
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www.spacetelescope.org

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News release:

FITS format liberation

– DIY astronomical images with the expert touch

08-July-2004 **For many years astronomical images from the world's telescopes were reserved for an elite of astronomers and technical people. Now anyone with a desktop computer running Adobe® Photoshop® software can try their hand at crafting astronomical images as beautiful as those from the Hubble Space Telescope. A free software plug-in, released today, makes a treasure trove of archival astronomical images and spectra from the NASA/ESA Hubble Space Telescope, the European Southern Observatory's Very Large Telescope, the European Space Agency's XMM-Newton X-ray observatory, NASA's Spitzer Space Telescope and many other famous telescopes accessible to home astronomy enthusiasts.**

If there is anything that unites astronomy, it is the worldwide use of a single file format - nearly all the images of stars and galaxies produced by telescopes on the ground and in space are stored as so-called FITS files. Unfortunately this file format has been accessible to very few people other than professional scientists using highly specialised image-processing tools.

Now a new and unique tool - the ESA/ESO/NASA Photoshop FITS Liberator – developed by imaging scientists at the European Space Agency, the European Southern Observatory and NASA makes the immense wealth of astronomical images and spectra stored in data archives around the world accessible to the layman. The only thing required is access to either Adobe Photoshop® or Adobe Photoshop Elements®, both leading image software packages.

For the professional creators of astronomical colour images, the plug-in revolutionises the workflow of the creation of colour images from raw data and gives a huge boost to the image quality by giving access to the full 16 bit (65536 colours) range of the observations. In addition the plug in may be used as a powerful educational tool when teaching about light, colour and digital images. Some examples of educational material are available at the web page below.

The ESA/ESO/NASA Photoshop FITS Liberator will be released today and is freely available for download from:

http://www.spacetelescope.org/projects/fits_liberator

Head of the development team, Lars Holm Nielsen from Denmark, says, *"FITS is much more than just an image format. It is an extremely flexible file format that allows astronomers to share images and spectra in many different ways. This very versatility has made the job of producing a plug-in for Photoshop challenging. Compared to formats like JPEG, FITS files can be incredibly diverse."*

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Notes for editors

The ESA/ESO/NASA Photoshop FITS Liberator works on Windows PCs and Macs (OS X 10.2+) and is optimised for Photoshop CS, but also works in Photoshop 7.0 (only 15 bit support) and Photoshop Elements 2 (only 8 bit support).

FITS is an abbreviation for Flexible Image Transport System and has been a standard since 1982 and is recognized by the International Astronomical Union.

The team that produced the ESA/ESO/NASA Photoshop FITS Liberator consists of:

Project Leader: *Lars Lindberg Christensen*

Development Leader: *Lars Holm Nielsen*

Graphical Interface Programming: *Kasper K. Nielsen*

I/O programming: *Teis Johansen*

Technical, scientific support and testing: *Robert Hurt, Zolt Levay, Bob Fosbury and Richard Hook*

The ESA/ESO/NASA Photoshop FITS Liberator uses NASA's CFITSIO library.

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Image credit: ESA, ESO and NASA

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