

What's New at Dundee Satellite Receiving Station

If any of the new features described below are causing problems then please [notify the webmaster](#).

- 9 February 2005: The [PDUS](#) reception system developed a temporary fault affecting all geostationary images. A temporary replacement is providing [geostationary images from MSG](#) (Meteosat Second Generation) instead.
- 24 December 2004: The NASA agreement with Orbimage to purchase SeaWiFS data has ended, causing the loss of all research-use licences to real-time data. Dundee is still receiving and archiving the encrypted data, with the hope of decryption keys being made available when a new agreement is finally reached.
- 20 November 2004: The Satellite Receiving Station is currently exhibiting a collection of satellite images in the Lamb Gallery of the University of Dundee. The gallery, on the first floor of the Tower Building, contains both black-and-white and colour images showing many interesting land and weather features. On display are real-time satellite images shown as they are being received from an antenna on the Dental Building, and even a small antenna is simulating the tracking of these satellites. Entrance is free and the exhibition runs until 14 January.
- 09 July 2004: Our Meteosat Image Archive is now available from our web site, giving easy (if not yet fast) access to nearly three years of full-resolution images. To access it follow the link from the bottom of the "Archive" page for any of the [Meteosat](#) sensors.
- 19 April 2004: Apologies for the absent web site today; our RAID server developed a problem with two hard disks simultaneously.
- 15 April 2004: The [Interesting Images](#) page has been updated with images of a "square" cloud and of the first recorded hurricane in the South Atlantic.
- 24 March 2004: There was a small break in service caused by our firewall exploding.
- 10 March 2004: We have now installed a new antenna on the top of another university tower building. At the moment it is a 1.8m reflector and will be used to receive SeaWiFS and AVHRR, replacing the small antenna which was recently removed from the dental tower building. The [webcam](#) page does not show the new antenna, although it does still show the ghost of the old one!
- 15 January 2004: Terra Direct Broadcast has been restored.
- 14 January 2004: NOAA-16 has more problems with the AVHRR scan motor.
- 01 December 2003: Terra has developed a problem with it's direct broadcast transmission causing the downlinked data to be corrupt. NASA are working on a solution but until it is implemented we are receiving MODIS data from Aqua.
- 22 September 2003: Recent passes from NOAA-16 show that it is suffering a similar fate to NOAA-15, ie. problems with the AVHRR scan motor. Incidentally, it looks as though [the NOAA-N' launch may be delayed](#).
- 14 August 2003: New SeaWiFS policy: the quicklooks are now available to all users. The only necessity for registration with NASA is for viewing the most recent 14 days. Similarly for ordering any high resolution data over 5 years old (more recent high resolution data still requires NASA registration).
- 30 June 2003: Geostationary images were unavailable over the weekend 28/29 due to DNS problems. Current imagery is being served OK.
- 10 March 2003: The [PDUS](#) (geostationary) images are now available only to registered users, although they remain free. You can avoid entering your password by [setting a new cookie](#).
- 15 January 2003: Pass database search results can now be browsed using the Next Result and Previous Result links at the top of the quicklook images.
- 26 October 2002: Sorry for the interruption to our service which was caused by an extended

power failure to the building (lasting longer than our UPS batteries).

- 16 October 2002: [Navigation correction](#) of NOAA AVHRR images on this site is now being carried out using software provided by VCS Aktiengesellschaft.
- 30 September 2002: The SeaWiFS satellite had an onboard computer reset September 26. Although there was no interruption in imaging, the spacecraft clock was affected, and all data taken since then have significant navigation errors (~40 km). OrbImage plans to correct the clock error and assess the extent of the problem. Hopefully some form of correction may be possible to recover the navigation for this period.
- 27 June 2002: New [web cameras](#) have been installed to monitor the antennae live as they track satellites.
- 24 June 2002: NOAA-17 was launched successfully.
- 27 May 2002: The whole of our [AVHRR archive](#) is now available as quicklooks from our web site, as the long process of copying from tape to CD-ROM has finally been completed.
- 16 April 2002: MODIS reception has been sporadic recently due to NASA Ground Network tests, Terra SFE shutdown and antenna re-wiring.
- 29 March 2002: MODIS has been returned to working Science Mode and the Nadir Aperture door was opened at approximately 22:53 GMT on March 28. We have successfully acquired MODIS imagery today.
Firewall testing will take place again on Monday 1st April.
- 26 March 2002: We are installing a Firewall on 28th March. There may be minor interruptions during the day to WWW access while the firewall is tested.
- 21 March 2002: Terra was placed into a safe hold mode following a routine orbital maneuver on 19th March. There was no MODIS data transmission from Terra on 20th March.
- 4 February 2002: We are now receiving and archiving night-time MODIS data, giving a total of six to eight passes per day. Note that MODIS does not transmit any visible channels during the night; for details see the [MODIS scanner](#) document.
- 28 January 2002: Some passes have not been received today and others have been truncated to protect the antennas during the 160 km/hour winds.
- 11 October 2001: Added a MODIS [Frequently Asked Questions](#) page to cover most of the recent MODIS developments.
- 21 August 2001: Two exciting improvements to our free images:
 - [UK close-up images](#) are much larger and use a better projection.
 - [MODIS quicklooks](#) are now available reprojected and in colour.
- 25 July 2001: Mount Enta, a volcano on the island of Sicily, erupted recently. The effects are clearly visible from our [satellite images](#).
- 3 July 2001: MODIS is working again; [three good passes](#) were recorded today.
- 22 June 2001: Added images of [solar eclipse over Africa](#), 21 June 2001.
- 19 June 2001: The lack of MODIS images on our web site is due to a problem with the instrument. NASA are currently investigating it and hope to have the problem resolved soon.
- 7 June 2001: Our [new antenna](#) has been brought into service for MODIS reception. As it is in a better situation than our old antenna we will no longer experience the signal loss on easterly passes which caused a dropout over Scandinavia.
Some web pages and software have been upgraded - let us know if you experience any problems.
- 11 May 2001: Added more images to our [new antenna page](#).
- 7 May 2001: We are now routinely receiving broadcasts from NOAA-16 as the sea surface temperature algorithm parameters have been confirmed.
- 2 April 2001: MODIS data reception from Terra has been restored after the failure of MODIS Receiver. Current system is using a prototype MODIS receiver on loan from Crawford Space Communications. So far all indications are that the receiver is functioning as intended.
- 30 March 2001: Three AVHRR passes were lost early this morning due to a power failure in the building. PDUS transmissions were also missed. Two MODIS passes were lost due to a hardware

failure caused by the power cut. The web server was unavailable all morning whilst a new UPS was installed (it was delivered too late to assist during the power cut!).

- 24th March: Two SeaWiFS passes were lost because OrbView-2 experienced difficulties in transmitting image data.
- 6 March 2001: MODIS data collected on 3 to 5 March 2001 has been archived but the imagery has not been extracted due to changes to the MODIS instrument made by Mission Operations in NASA. We hope to recover imagery and restore quicklooks in the near future.
- 28 February 2001: Meteosat midday images were not available from 21 to 27 February due to interference caused by the spring eclipse season.
- 14 February 2001: A complete power failure in the building this morning caused the loss of two AVHRR passes and a number of PDUS images.
- 09 February 2001: Added images of snow cover in Scotland to the [Interesting Images page](#).
- 09 January 2001: Added images of flooding in England to the [Interesting Images page](#).
- 20 November 2000: A problem with the XSU (Cross Strap Unit) on NOAA-14 caused corruption in data received from 16 November 15:12 to 19 November 04:43.
- 22 October 2000: A [new 2.8m antenna](#) has been installed for better reception from EOS and future satellites.
- 21 September 2000: NOAA-L (16) was successfully launched at 10:22 UTC. We will not be archiving data from it until it is officially declared operational in a few weeks time.
- 18 August 2000: MODIS transmissions have restarted after a hardware fault was corrected with a software patch.
NOAA-15 is still being tested. For details see the [NESDIS page](#).
- 8 August 2000: MODIS has been suspended whilst problems with its formatter are investigated. NOAA-15 AVHRR is no longer producing usable imagery.
- 10 July 2000: The AVHRR scan motor on NOAA-15 appears to have failed.
- 3 July 2000: [MODIS quicklooks](#) are available in our quicklook archive. Scenes are not yet available for ordering from our web site but can be supplied by arrangement.
- 29 May 2000: Meteosat and other geostationary satellite images were unavailable over the weekend due to the theft of some Sun computers from the University.
- 11 May 2000: The [first MODIS image from Terra](#) showing the UK is now available!
- 4 May 2000: We apologise for the lack of real-time SeaWiFS data over the past week, due to a failure of the Orbital SGP decryption box. However, no passes have been lost.
- 2 May 2000: First Terra direct broadcast images received and decoded successfully. Note that direct broadcast is switched off over Madrid due to NASA's Deep Space Network antenna there. This causes early termination of passes overhead of Dundee, as can be seen from the pass area on the [predictions](#) page.
- 3 March 2000:
 - The [Interesting Images](#) page has been updated with an image showing a volcano erupting on Iceland.
 - Midday images from Meteosat were not available for the last ten days due to interference caused by the eclipse season; sorry for any inconvenience.
- 24 February 2000: One AVHRR and one SeaWiFS pass were lost today due to a campus-wide total power failure.
- 20 December 1999: The [Terra](#) satellite was launched at 1900 GMT on 18 December 1999. Data from its [MODIS](#) sensor will be broadcast on X-band and received here in Dundee. We hope reception will start early in 2000 after the satellite has been tested and declared operational.
- 8 December 1999: Geostationary satellite images from GMS, GOES-East and GOES-West were not updated from 00:00 4 December 1999 to 18:00 on 6 December 1999 due to a failure in the uplink at CMS Lannion.
- 1 December 1999: Several passes were lost on 29 November due to a campus-wide total power failure. SeaWiFS data was not transmitted on 16-18 November as a precaution against the meteor

shower. We are still receiving NOAA-12 in preference to NOAA-15 since there are continuing problems after its switch to a replacement transmitter.

- 27 August 1999: The [Interesting Images](#) page has been updated with an image of circular contrails from an AWACS aircraft, and an image from the GOES-West satellite showing the moon in the background.
- 26 August 1999: The [Interesting Images](#) page has been updated with images of the solar eclipse and of the oil refinery fire in Turkey.
- 19 May 1999: Due to problems with data dropouts from NOAA-15 we have now reverted to NOAA-12. The problems are suspected to be caused by cracks in the connections to the satellite's antenna which have developed from thermal stresses as it emerges from shadow into sunlight. We will be monitoring NOAA-15 periodically to see if the situation improves. Let us know if you require any of NOAA-15's features such as channel 3A or the dual-slope visible channels.
- 29 April 1999: Pseudo-colour quicklook images are now available. They are not intended to represent true colour; rather to help distinguish between land, sea and cloud. For more details please see our [free images](#) page.
- 20 April 1999: High resolution data customers can supplement their image data orders with files containing the zenith and azimuth angles for both the satellite and the sun. Each of the four files will contain an angle for all pixels in the image.
- 9 April 1999: Recently we have been experiencing corrupted data from NOAA satellites, visible on quicklooks and in high resolution data. One reason was found to be interference from nearby newly-installed mobile telephone transmitters, although this has now been corrected. However NOAA have announced a problem with NOAA-15 that can result in corrupted data; please see their ["NOAA-15 HPRT Transmission Dropouts" bulletin](#) for more information.
- 1 April 1999: High resolution data customers can store their order settings as their default profile, see the [documentation](#) for more details.
- 2 November 1998: NOAA-15 passes are being routinely received and archived now that the satellite has been declared operational by NOAA. Note that it will be transmitting channel 3B continuously until February 1999; ie. there will be no alternating between channels 3A and 3B until then. **Important note for users of HRPT data:** if you request data in NOAA Level-1b format it will be in the new KLM style for NOAA-15 because the old format cannot represent the new calibration correctly. You should ensure your software can handle the new format before ordering. If you do not use the calibration, and wish to retain the old format then please [contact the webmaster](#).
- 22 October 1998: Images of the Indian Ocean from IODC(INDOEX) are now available on the [Geostationary Images](#) page.
- 14 September 1998: A [colour movie](#) is now updated every six hours from the latest [Meteosat](#) images.
- 19 May 1998: The [SeaWiFS quicklook archive](#) is now on-line and available to all those who have [registered](#) with NASA as an authorised research user.
- 15 May 1998: New satellite **NOAA-15** has been launched. The first images are in visible channels only while tests are performed. The satellite will become operational and replace NOAA-12 in a few weeks.
- 15 April 1998: Meteosat animation added to the [movie page](#).
- 1 March 1998: The latest [FULL RESOLUTION! Geostationary satellite images](#) received at Dundee from METEOSAT's HRI digital downlink have been added. Also included are GMS, GOES-E, GOES-W imagery. This is a developing service and may change in the future.
- 12 February 1998: Our **web server** is now running on a new machine which is much more powerful and has a faster network connection. Although the numerical address has changed, the name <http://www.sat.dundee.ac.uk/> remains the same. Our ftp server has also moved and no longer carries our quicklook archive.
Quicklooks for 1982 have been added to the web archive.

- 1 February 1998: [Quicklook archive](#) greatly expanded with the addition of images for 1978 to 1981, as well as 1993 to the present.
- 9 January 1998: Re-written [documentation](#).
- 18 November 1997: **SeaWiFS** data is now available in more image formats and can be calibrated to sensor radiances.
The **on-line files** listing can be sorted in various ways.
The quicklook archive browser no longer lists **GIF images**, only JPEG. GIFs are still available (replace .jpg with .gif in the URL) but most people should be using JPEG now as the files are smaller and faster to download. If you require GIF images please contact the webmaster.
- 5 September 1997: There is no longer any need for you to remember your username and password if your browser accepts cookies. Simply [set the cookie](#) once and it will persist until you next change your password. Authentication will be performed automatically so you will not be asked for your username and password.
- 1 August 1997: [SeaWiFS](#) launched successfully. Data will start flowing in the third week of September.
- 3 February 1997: Monthly quicklooks are now [available on CD-ROM](#).
- 26 November 1996: The whole quicklook archive for 1994 is now available.
- 25 November 1996: The Satellite Station's fibre optic network connection has been rerouted which we hope will increase data transfer rates.
- 6 November 1996: The introduction of replacement discs means that restoration of the quicklook archive can start. All images from 1995 and 1996 are now available.
- 5 November 1996: The high resolution service has been upgraded. The introduction of new software has meant some changes to the user interface and to the functionality. All HRPT customers should read the [documentation](#) to familiarise themselves with the changes.
An extra disc has increased the number of HRPT passes we can keep online.
- 25 October 1996: All quicklooks for 1996 have been restored.
- 17 October 1996: Maintenance undertaken this morning should make the system better able to cope with heavy loads.
- 23 September 1996: An extra satellite image, the NOAA-12 evening overhead pass, will be received at about 18:00 GMT each day.
- 05 August 1996: A disc crash has temporarily reduced the amount of QuickLooks we can make available from our archive. We hope to back to normal in a few weeks.
- 12 June 1996: The Pass Database now gives links to images showing the pass area. Complex searches can now include equator crossing angle ranges.
- 21 May 1996:
 - You can now [edit your personal preferences](#).
 - HRPT users can order re-projected and calibrated images.
- 26 April 1996: Installation of registration system for all users.
- 05 April 1996: HRPT orders can now request a calibration file too.
- 30 March 1996: Updated the [MPEG movie](#).
- 26 March 1996: Registered users can now set their preferred QuickLook size from the [personal preferences](#) page.
- 22 February 1996: Coordinates chosen in the [Pass Database](#) can now be combined using either AND or OR.
- 09 January 1996:
 - **New feature:** There are now URLs for downloading the latest images without having to browse the archive. Please read the [guide](#) for details.
 - Quicklook and HRPT directory documents ([browse](#) and [filesorder](#) respectively) should now expire from your cache after one hour to ensure that you have the latest copy.
 - Archive HRPT passes which have been reloaded can now be browsed and their quicklooks viewed.

- With the addition of another 9GB disc we have increased the size of our quicklook archive to include most of 1993 onwards.
- The number of recent HRPT files on-line has been increased to 36; over three days worth of passes.
- Links into the archive for the most recent day/month/year are now fixed.
- The ordering system has been reimplemented for registered HRPT users.
- 22 November 1995: GIF quicklooks are now interlaced so you should see the full image quickly at a coarse resolution which will improve as more data is transferred. If interlaced GIFs cause problems please notify the webmaster.
- 06 October 1995: We have increased our disc space for live passes and so are now receiving 8 per day. We hope to increase this to 12 soon.
- 02 October 1995: Added a [Frequently Asked Questions](#) file.
- 29 September 1995: The projection of the area around the UK is now histogram equalised so it should look better.
- 30 June 1995: New reception software is in operation. The visible difference is much more detailed grids on the quicklooks.
- 19 June 1995: Quicklooks can now be transferred in JPEG format as well as GIF so they should transfer three times quicker. Because JPEG is 'lossy' there may be a tiny loss of quality although it should not be noticable.
- 26 May 1995: Added [interesting images](#) page.
- 11 May 1995: Links into various parts of the archive have been added to the home page. The program `/abin/browseroot` now takes you to root of the archive, rather than the latest pass. People with links straight to that program please take note!
- 15 February 1995: NOAA-14 [Calibration Data](#) added.
- 19 January 1995: Documentation on [Satellite Projections](#) added.
- 19 January 1995: NOAA-14 is now fully operational. Passes will be received and archived from 19th/20th January.
- 18 January 1995: The area covered by a [predicted pass](#) can now be viewed.
- 16 January 1995: A standard map projection for a fixed area is now available for recent passes.
- 09 January 1995: NCSA Server upgraded with bug fix to prevent truncated images. The bug only affected certain users (eg. Solaris or PC) but caused corrupt thumbnails and quicklooks.
- 06 January 1995: NOAA-14 has been launched. It is still in testing but the software has been upgraded in preparation.
- 06 January 1995: High-resolution [order form](#) preceded by new document showing [current HRPT files](#) graphically.
- 10 November 1994: New [pass database](#) interface. This should replace both the old pass database and the thumbnails browser.
- 14 September 1994: NOAA-11 [AVHRR](#) scanner failed. NOAA-09 will be received instead.
- 09 September 1994: Pass database created.
- 09 September 1994: What's New page created.
- 08 September 1994: [Thumbnails](#) pass categories altered, especially Overhead which now has some overlap with Westerly and Easterly passes.
- January 1994: The launch of (probably) the world's first satellite receiving station web site.



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