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News release:

Three Good Reasons for Celebrating at the ESO/ST-ECF Science Archive Facility

- Great Demand for Data from New "Virtual Observatory"

13-Dec-2000 Due to a happy coincidence the ESO/ST-ECF Science Archive Facility is celebrating three different milestones at the same time: its 10th anniversary, the 10,000th request for data and the signing-up of active user number 2000.

Just 10 years ago, on the 1st of January 1991, the ESO/ST-ECF (European Southern Observatory/Space Telescope-European Coordinating Facility) Science Archive Facility opened. It has since served the astronomical community with gigabyte after gigabyte of high-quality astronomical data from some of the world's leading telescopes.

The Archive, which is located in Munich, Germany, contains data from the 2.4 meter NASA/ESA Hubble Space Telescope, as well as from several ESO telescopes in Chile: the four 8.2-m Unit Telescopes of the Very Large Telescope (VLT) at the Paranal Observatory and the 3.5-m New Technology Telescope (NTT), the 3.6-m telescope and the ESO 2.2-m telescope at La Silla.

The Archive is a continuously developing project - in terms of the amount of data stored, the number of users and in particularly because of the current dramatic development of innovative techniques for data handling and storage. In the year 2000 more than 2 Terabyte (2000 Gigabytes) of data were distributed to users worldwide.

# Celebrating the 10th anniversary

Due to a happy coincidence the Archive passes two other milestones almost exactly at the time of its 10 year anniversary: the 10,000th request for data has just arrived, and active user number 2000 has just signed up to start using the Archive.

Dataset number 10,000 was requested by Danish astronomer Søren Larsen who works at University of California (USA). He asked for images of galaxies taken with the Hubble Space Telescope and expressed great satisfaction with the material: "The extremely sharp images from Hubble have provided a quantum leap forward in our ability to study star clusters in external galaxies. We now know that some galaxies contain extremely bright young star clusters. These might constitute a 'link' between open and globular clusters as we know them in the Milky Way galaxy in which we live. We are trying to understand whether all these clusters really form in the same basic way."

Active user number 2000 is Swiss astronomer Frédéric Pont from Universidad de Chile: "We use observations from the ESO VLT Unit telescopes to map the chemical and star-formation history of dwarf galaxies in the Local Group. The stars we are looking at are very faint and we simply need the large size and excellent quality of the VLT to observe them in detail. With the new data, we can really move forward in this fundamental research field."

To celebrate this special occasion, a 4-page brochure has been prepared that describes the Archive and its various services. The brochure can be requested from ESO or the ST-ECF and is now available in PDF format on the web.

As a small token, the two astronomers will receive a commemorative version of the photo that accompanies this release.

## The ASTROVIRTEL initiative

One of the major new initiatives undertaken by ESO and ST-ECF in connection with the ESO/ST-ECF Science Archive is ASTROVIRTEL (Accessing Astronomical Archives as Virtual Telescopes). It is a project aimed at helping scientists to cope efficiently with the massive amounts of data now becoming available from the world's leading telescopes and so to exploit the true potential of the Archive treasures. ASTROVIRTEL represents the European effort in an area that many astronomers consider one of the most important developments within observing astronomy in the past decade.

#### The future

The head of the ESO/ST-ECF Science Archive Facility, Benoît Pirenne, believes that the future holds excitings challenges: "Due to the many improvements of the ESO, NASA and ESA telescopes and instruments expected in the coming years, we anticipate a tremendous increase in the amount of data to be archived and re-distributed. It will not be too long before we will have to start counting storage space in Petabytes (1 Petabyte = 1,000 Terabyte). We are now trying to figure out how to best prepare for this new era." But he is also concerned with maintaining and further enhancing the astronomical value of the data that are made available to the users:

"Apart from improving on data storage, we need to invest much effort in building automatic software tools that will help users with the tedious pre-processing and 'cleaning' of the data, thereby allowing them to focus more on scientific rather than technical problems."

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## **Image Caption**

Collage of the Hubble Space Telescope above the world's largest optical/infrared telescope, the Very Large Telescope (VLT).

Image Credit: ESO/ST-ECF.

#### **Notes for editors**

The Hubble Space Telescope is a project of international co-operation between NASA and ESA.

This is a joint news Release by the European Space Agency (ESA) and the European Southern Observatory (ESO).

Key dates:

10 year anniversary of the Archive: 1.1.2001

10 000th data request: 17.11.2000 2000th active user: 10.12.2000

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