

## **Background Information:**

### **What is a Virtual Observatory? - A short introduction**

The Virtual Observatory is an international astronomical community-based initiative. It aims to allow global electronic access to the available astronomical data archives of space and ground-based observatories, sky survey databases. It also aims to enable data analysis techniques through a coordinating entity that will provide common standards, wide-network bandwidth, and state-of-the-art analysis tools.

It is now possible to have powerful and expensive new observing facilities at wavelengths from the radio to the X-ray and gamma-ray regions. Together with advanced instrumentation techniques, a vast new array of astronomical data sets will soon be forthcoming at all wavelengths. These very large databases must be archived and made accessible in a systematic and uniform manner to realise the full potential of the new observing facilities.

The Virtual Observatory aims to provide the framework for global access to the various data archives by facilitating the standardisation of archiving and data-mining protocols. The AVO will also take advantage of state-of-the-art advances in data-handling software in astronomy and in other fields.

The Virtual Observatory initiative is currently aiming at a global collaboration of the astronomical communities in Europe, North and South America, Asia, and Australia under the auspices of the recently formed International Virtual Observatory Alliance.