Astronomy from Large Astronomical Databases: Current Status and Scenarios

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In the near future, the astronomical community will have the opportunity to observe the universe from a number of European astronomical space mission, carrying experiments covering all the wavelength ranges from infra-red to hard x-rays. These space mission will gather huge volumes of new data tretment and new research facilities. Information system and sufficient retrieval techniques will play a critical role for dealing with the expected volumes of data.

It will be paramount importance to provide the European astronomical community with tools and capabilities for managing, archiving, accessing, and retrieving very large, complex multiparameter, multi-mission data sets. Areas of development should also include expert system, artificial antelligence, data management storage and acces technologies, user acces and interfaces, and related subjects.

In this review paper I discuss the general lines of astronomical databases such as EXOSAT, IRAS, Hubble Space Telescope Archive, VILSPA/IUE/ULDA, SIMBAD and NASA/IPAC Extragalactic Databases. As an "distributed database management system" European Space Information System (ESIS) is also included. The data model, data types, user interface(s) access methods and some astronomical scenarios are presented for each database.