

# EURONEAR

## The European Near Earth Asteroid Research

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# What is EURONEAR?

**EURONEAR - The European Near Earth Asteroid Research is a project which envisions to establish a coordinated network which will follow-up and recover Potentially Hazardous Asteroids (PHAs) and Near Earth Asteroids (NEAs), using 1 m class telescopes (dedicated and non-dedicated) located in Europe and elsewhere.**

# Why EUROMEAR?

- **Continuous increase in the number of newly discovered NEAs/PHAs (NEAs by 200-500, PHAs by 50-90 discovered per year (EARN 2006));**
- **There is no European dedicated program/telescope to observe NEAs/PHAs;**
- **Follow-up observations of NEAs/PHAs are necessary in order to:**
  - **Recover new discovered bodies;**
  - **Secure and improve their orbits;**
  - **Predict future close encounters and possible collisions with Earth;**
  - **Determine physical parameters (rotation periods, colors, taxonomy, etc);**
  - **To revive 1m class unused telescopes located at major observatories;**


# The Network

- **"Dedicated" Facilities (assisted or remote):**
  - Pic du Midi, 1m;
  - La Silla, 1m class – proposal to ESO to establish the EURONEAR consortium to automate one unused telescope at La Silla (July 2006);
- **"Non-Dedicated" Facilities:**
  - Haute du Province, France, 1.2m;
  - SAAO, South Africa, 1m;
  - AIRA, SARM, Romania;
  - Any external collaborator is welcomed;
  - Amateurs, planetaria, colleges, schools, etc;
- **Data Reduction Facilities:**
  - IMCCE, France;
  - AIRA, SARM, Romania;

# First Results



**The first three points in the EURONEAR constellation network were marked recently by four observing runs which took place in 2006 at Pic du Midi (see the poster), Haute de Province, and Bucharest.**



# Next Plans

**To enlarge the palette of contributions, EURONEAR was envisioned as a network in two directions. First, we aim to establish two dedicated facilities, namely two 1m telescopes in Chile and Europe to cover both hemispheres.**

**Following an observing run in Chile, and a visit of OV to ESO in Santiago, an EURONEAR Committee of Initiative has been established.**

**Recently, the ESO 1m telescope has been allocated at ESO La Silla, to be automated to work for EURONEAR (ESO, 2006).**

# Next Plans

ESO La Silla - Chile



# Next Plans

ESO La Silla - Chile





# Next Plans

**A second automated facility we hope to be installed in Canary or Pic du Midi in the future.**

**Second, individuals in Europe and elsewhere are expected to subscribe to EURONEAR using available time at their home based non-dedicated facilities in Europe and elsewhere. In this direction, among other sources, EURONEAR aims to gather funding from a dedicated Consortium comprised of European institutions (observatories, universities, colleges, schools, planetaria), as well as from individual astronomers (professionals and amateurs) which will gain membership in EURONEAR. In exchange for their support, members will have full access to the EURONEAR facilities and data, based on which they will conduct real science in a coordinated fashion, performing (remote) observations, reducing the data, publishing papers, advising Diplomas, Master or PhD Thesis, and conduct public outreach.**

# Further information



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