


## EUSO Phase A: Industrial Activity

- **Instrument System Engineering** **ALENIA Spazio**
- **Thermal Control Structures and Mechanisms** **ALENIA Spazio**
- **Product Assurance & Safety** **ALENIA Spazio**
- **Electronics System Engineering** **Laben**
- **Mechanical and Thermal Engineering of the Focal Surface** **Laben**
- **Feasibility Analysis and Support for the Front End ASIC** **Laben**
- **Power Distribution and Conversion** **Laben**
- **LIDAR** **CREO** 

## EUSO PHASE A

### ITALIAN SPACE AGENCY (ASI) FUNDING:

775 kEuro (1500 Mlit)

- Scientific activity                      362 kEuro (700 Mlit)
- Industrial activity                        413 kEuro (800 Mlit)

EUSO PHASE A  
ASI FUNDED ACTIVITIES

- General Management (Industrial support)
- Instrument System (Industrial support)
- Photo detector (Industrial support)
- Trigger & OBDH (Industrial support)
- LIDAR (Industrial support)
  
- Science
- Simulations (EAS + instrument)
- Study of atmospheric phenomena
- Ground Data Handling
- BKG & Cherenkov measurements

## EUSO Phase A Italian Scientific Collaboration

CARSO, Center for Advanced Research in Space Optics, Trieste

CNR-IFCAI, Istituto di Fisica Cosmica con Applicazioni all'Informatica, CNR, Palermo

CNR-ISAO, Istituto di Scienze Atmosferiche e Oceaniche, CNR, Bologna

INOA, Istituto Nazionale di Ottica Applicata, Firenze

Osservatorio Astrofisico di Arcetri

Osservatorio Astrofisico di Catania

UNI-FI, Dipartimento di Fisica, Dipartimento di Astronomia, Università di Firenze, Firenze

UNI-GE, Dipartimento di Fisica, Università di Genova, Genova

UNI-PA, Dipartimento di Fisica e Tecnologie Relative, Università di Palermo, Palermo

UNI-Roma, Dipartimento di Fisica, Università di Roma "La Sapienza", Roma

UNI-TO, Dipartimento di Fisica, Università di Torino, Torino

UNI-TS, Dipartimento di Fisica, Università di Trieste, Trieste

INFN (sezioni di Catania, Firenze, Genova, Torino, Trieste)

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# EUSO-Italy: INFN support to EUSO

- INFN has a strong interest in the EUSO project, which naturally falls among its traditional fields of interest (cosmic rays and neutrinos).
- INFN is contributing with its own personnel, structures, laboratories, services as well as its own funding.
- INFN and ASI coordinate themselves by means of a joint dedicated Committee.
- INFN has approved (for 2001 and 2002) an R&D program for the development of the photo-detector (and related electronics) for an experiment to observe EAS from space, and for related support activities.
- The total funding for 2001 and 2002 is 405 k€ for the following activities (most of them will be a cooperation with industry):
  - ✓ Development and functional design of the photo-detector elementary cell.
  - ✓ Functional design and engineering of the photo-detector.
  - ✓ Development and design of the front-end electronics.
  - ✓ Support activities: background and Cherenkov reflected/diffused light measurements.
  - ✓ Development of the simulation code of the experimental apparatus.
  - ✓ Phenomenological study of astrophysical models for the acceleration to extreme energies.
  - ✓ Study of the propagation of EHE particles in the Earth or atmosphere.