10 Years of PRISMA: Between Research, Outreach, and Dissemination

10 anni di PRISMA tra ricerca, divulgazione e disseminazione

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10 PRISMA

The PRISMA Fireball Network

Prima Rete Italiana per la Sorveglianza sistematica di Meteore e Atmosfera
i.e. First Italian Network for the Systematic Surveillance of Meteors and Atmosphere

- established in **2016** by INAF → *currently **celebrating the first ten years** of the **PRISMA project***
- partner of the **FRIPON** international collaboration

How does **PRISMA** work? → **continuous monitoring** of the Italian skies → **bright meteors**

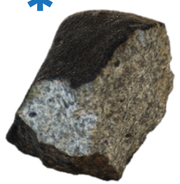
calculation of

- the **orbits** of the **meteoroids** that **originated them**
- the **strewn-field** of the **possible meteorite fall** → **recovery**, **analysis** and **classification**



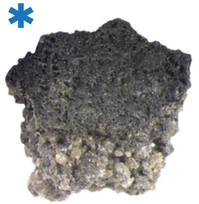
Credit: PRISMA/INAF

The PRISMA Fireball Network



Credit: PRISMA/INAF

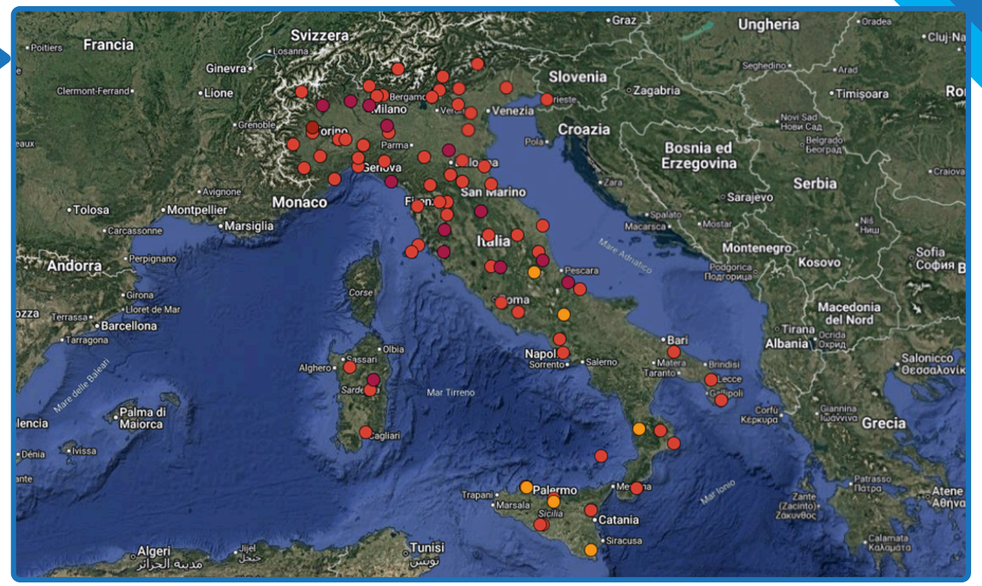
Cavezzo *meteorite*
New Year's Eve *fireball*
1st January ***2020***



Credit: PRISMA/INAF

Matera *meteorite*
St. Valentine's *fireball*
14th February ***2023***

- deployed more than **100 all-sky cameras**
- recovered **2 freshly-fallen meteorites** *
- is able to **actively engage its community**



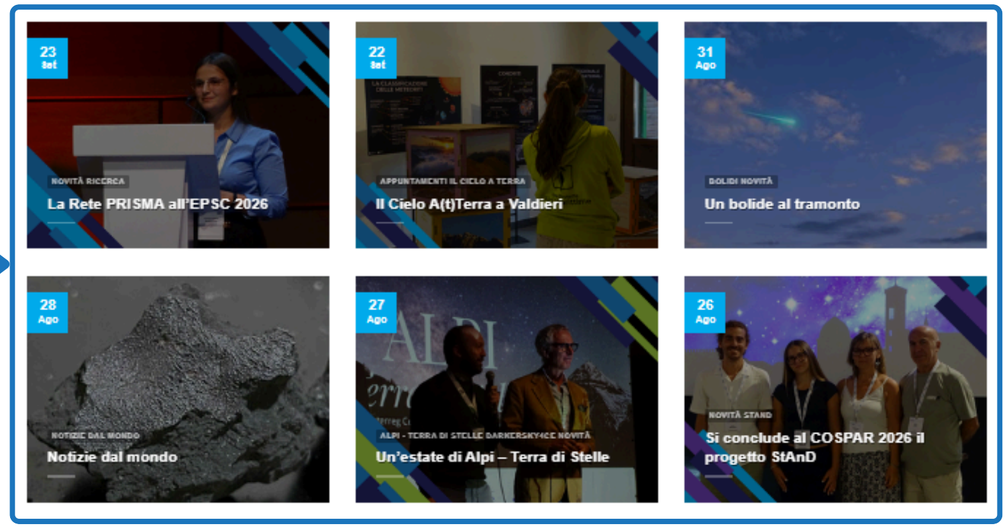
research institutions, **universities**, **schools**, amateur **astronomy groups**, **associations** and many other **local organisations**

The **strength** of the **PRISMA** project **=** being a **cross-disciplinary research** and **citizen science project** **+** being capable of **engaging scientists**, **students** and the **general public** alike

The PRISMA Website

- **10 years logo** design
- **new graphics**
- **MEDIA INAF videos**

- **completely renewed**
- **launched** on **11th March 2026**
- a true **logbook** of **PRISMA activities**
- **meant for** the whole **PRISMA community**

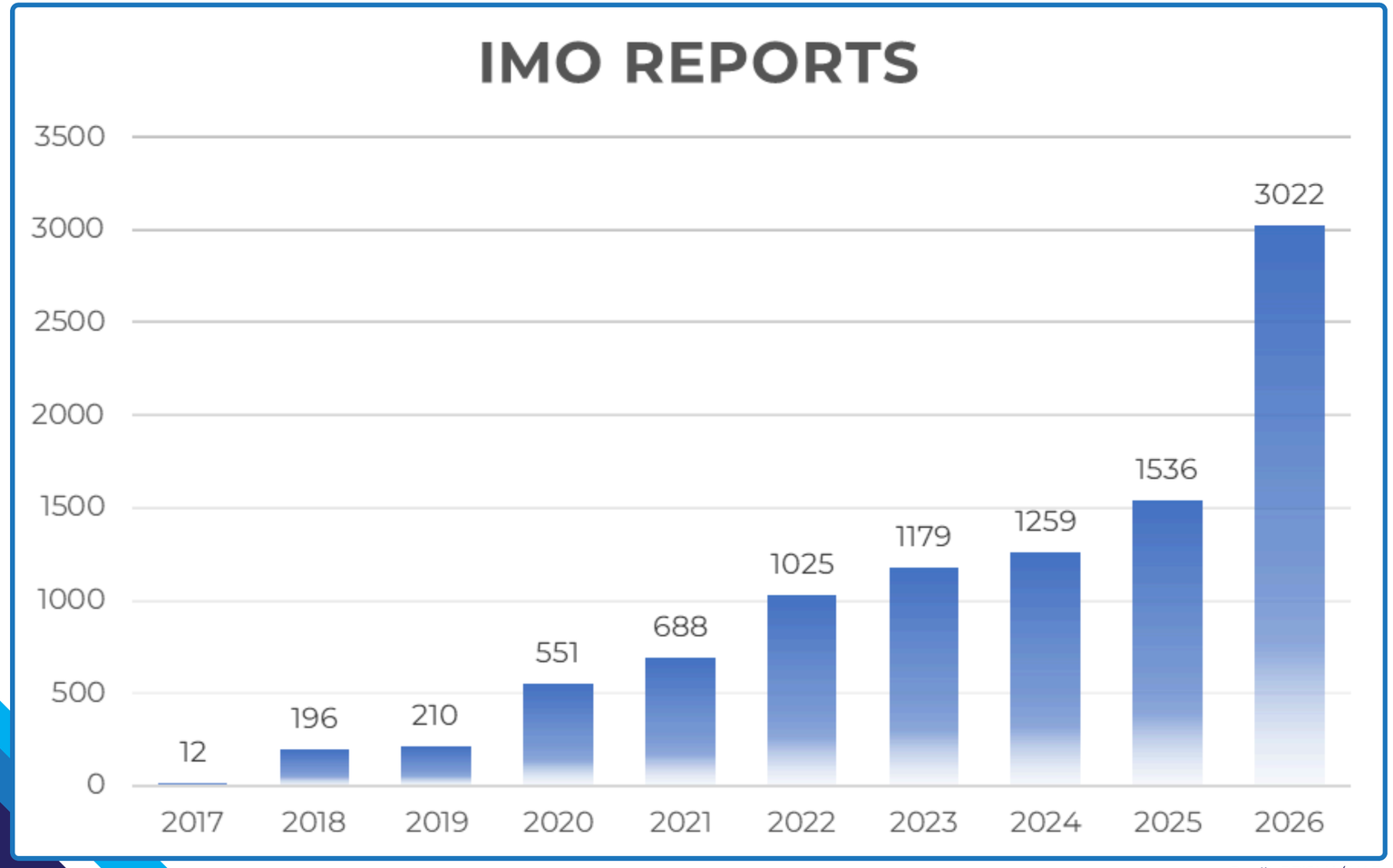


Credit: PRISMA/INAF



Credit: PRISMA/MEDIAINAF

International Meteor Organization Reports via the PRISMA Website



Credit: PRISMA/INAF



+ alleged **meteorite reports** via email

+ “**fan mail**”

The PRISMA Newsletter

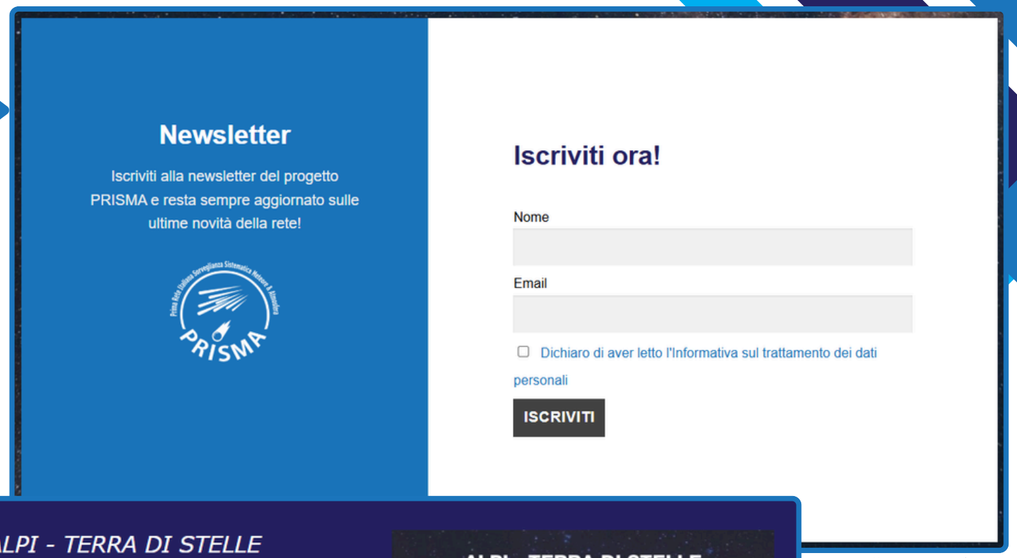
total n° of subscribers
to date ≃ **680**

- published on **the last Friday of every month**
- at least **4 articles per month**
- **highlight** of the month
- "**News from Around the World**" section
- **articles** published **in collaboration**

"Le stelle cadenti della notte di San Lorenzo, dal mito alla scienza moderna"

"ITMO01: la camera PRISMA di UniMol, la prima in Molise"

"La Terra è pronta a difendersi dagli asteroidi?"



Credit: PRISMA/INAF



Credit: PRISMA/DARKERSKY4CE

PRISMA Social Media

- **Facebook**, ≃ 1890 followers
- **Instagram**, ≃ 250 followers
- **organic content**
- implementation of **posts in “collab”**





Credit: PRISMA/INAF

PRISMA Dissemination

- at **conferences**, e.g. ACM, COSPAR, EPSC, EU-ESA Workshop, etc.
- at **popularisation events**
- through **workshops** for **primary/secondary school** and **university students** and **teachers**
- through **reportage** of **project activities**
- through the **new project graphics**, which are able to “**integrate**” **all PRISMA-related projects** *



Credit: PRISMA/INAF

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StAnD - StudenTs As plaNetary Defenders

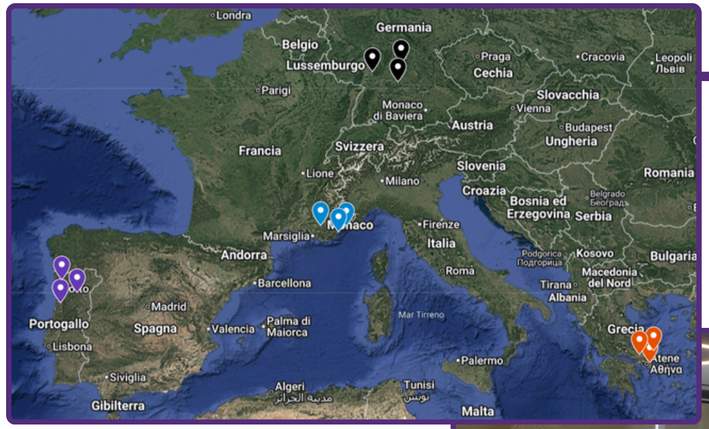
Erasmus+ project

Italy · France · Germany · Greece · Portugal

to **inspire** primary and secondary school **students and teachers** with an interest in **asteroids**, **meteors** and **planetary defence**

to **raise awareness of** and **spark an interest in space sciences** and **space exploration**

to **improve students' skills in STEM** (Science, Technology, Engineering and Mathematics)



3 all-sky cameras in each country *of the* ***partnership***



Credit: PRISMA/INAF

StAnD - StudenTs As plaNetary Defenders

Academy

Teacher training activities

- ***Teachers' Manual***
  *A **manual** covering selected topics in **STEM** and **Astrophysics***
- ***MOOCs (Massive Open Online Courses)***
  Online courses for teachers
- ***Summer Schools***
  Summer training courses

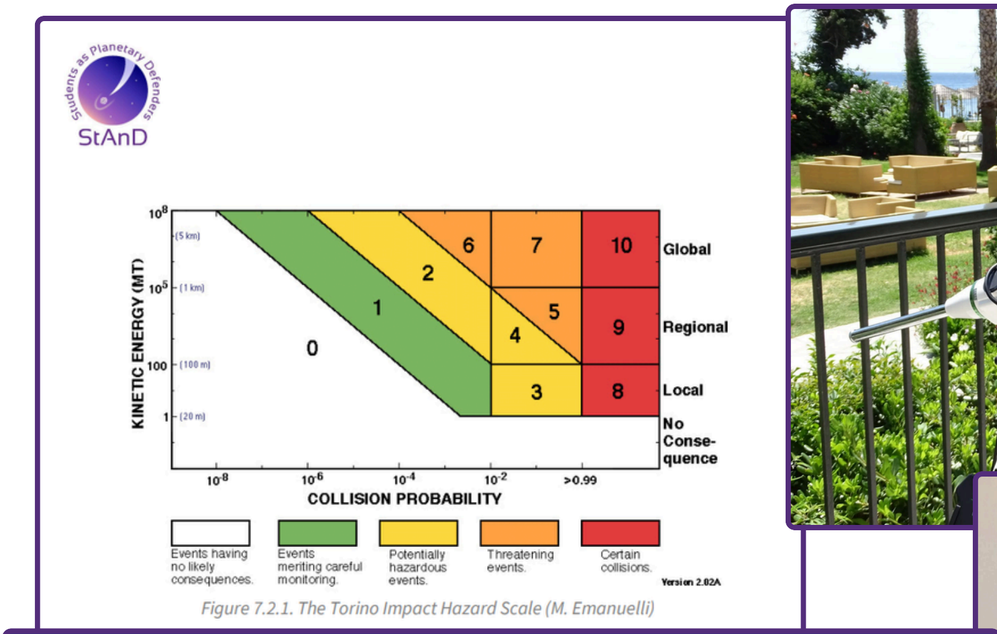
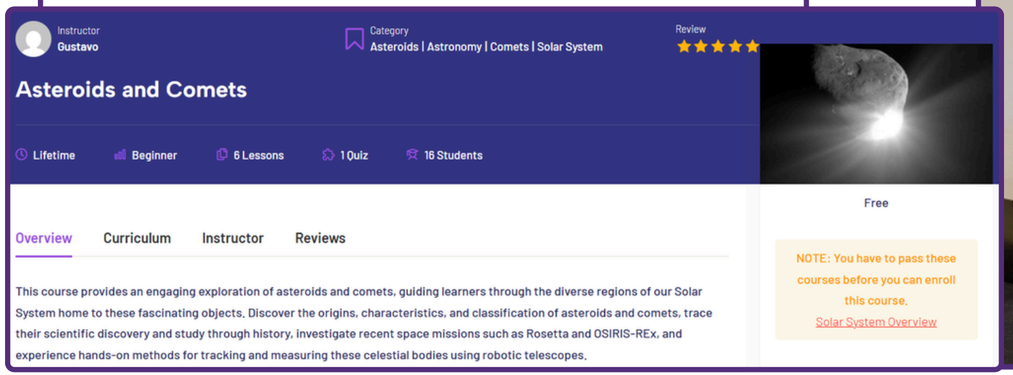
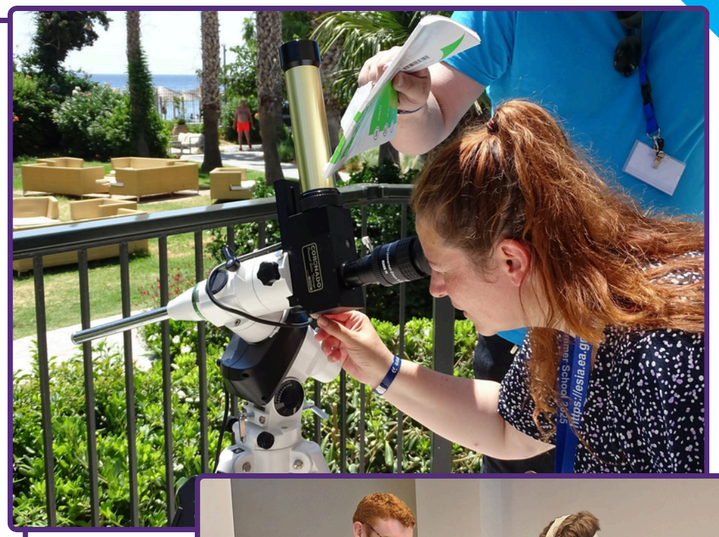


Figure 7.2.1. The Torino Impact Hazard Scale (M. Emanuelli)



Credit: StAnD





Credit: PRISMA/INAF

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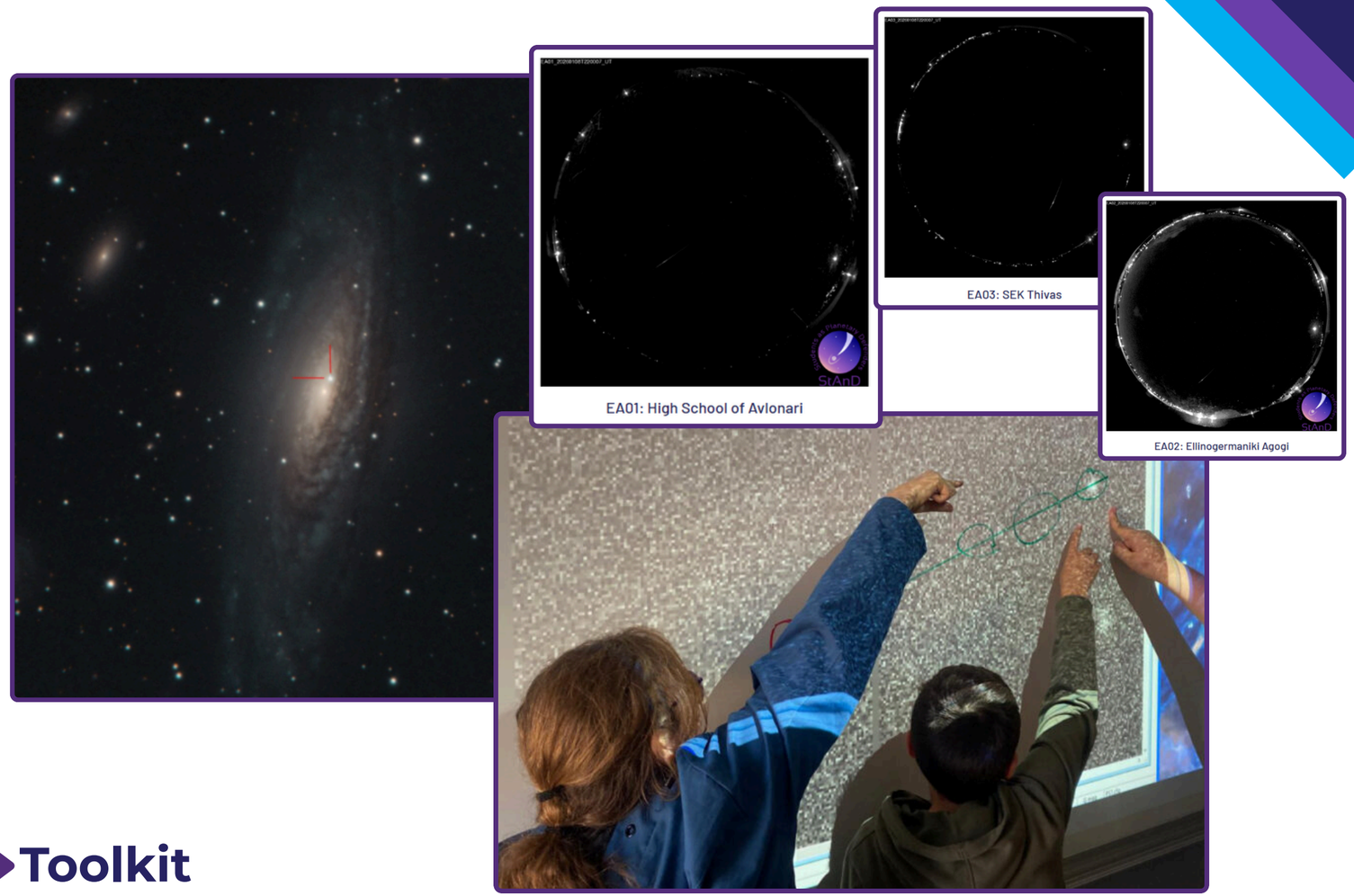
Implementation

Implementation of activities in schools

- ***Asteroid Search Campaigns***
  *Use of **remotely operated robotic telescopes** for **observational campaigns** and any **follow-up observations***
- ***School Scenarios***
  Teaching scenarios
- ***Micrometeorite & Meteor Camera Kits***

→ **Toolkit**



Credit: StAnD

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- **Meteor Camera Kit Activity** → using a **goniometer** and a **ruler**
- **PASCAL - PRISMA All-Sky Camera Analysis Laboratory** → using a **user-friendly**, **GUI-based application**

meant to present:

- the **main stages** involved in a **meteor detection**
- the **possible consequent meteorite recovery** and **analysis**

How?

- through an **interactive simulation**
- through the **use of actual PRISMA calibration and fireball data**







Credit: PRISMA/INAF

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Meteor Camera Kit Activity *



Credit: PRISMA/INAF

*Micrometeorite Kit



Credit: StAnD

Credit: PRISMA/INAF

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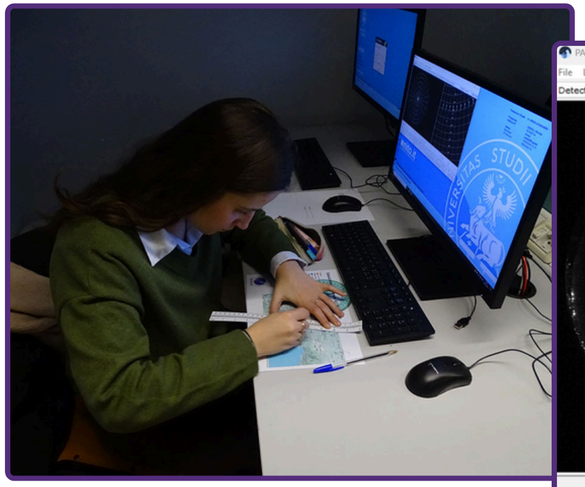
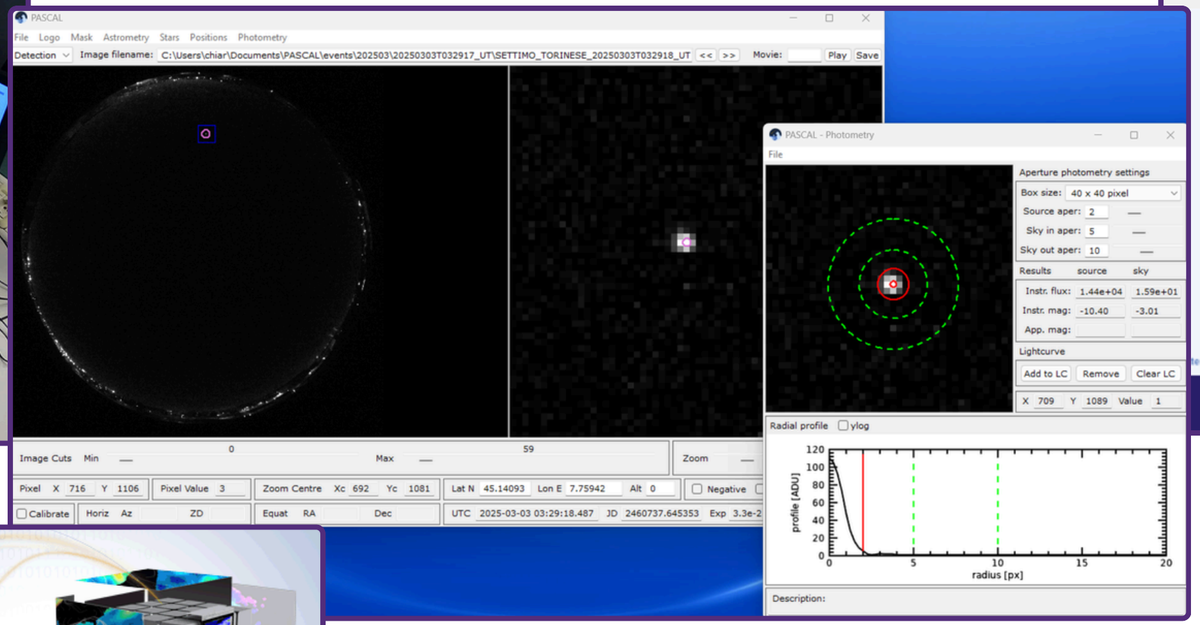
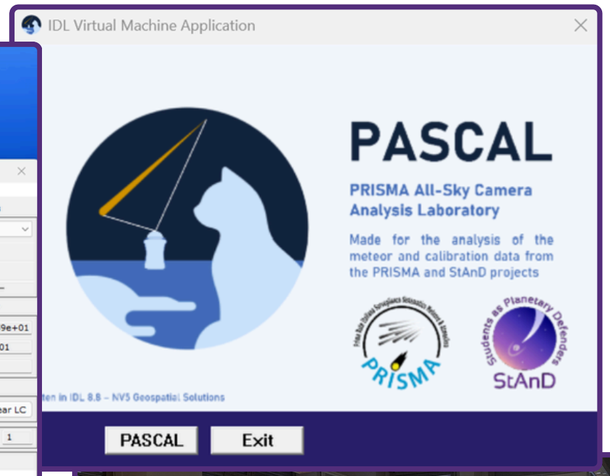
PASCAL *











Credit: PRISMA/INAF

* • ***astrometry***
• ***photometry***
• ***light curve***

\+ ***StAnD educational activities*** *and* ***teaching scenarios*** *are being* ***implemented in every country*** *of the* ***partnership***

StAnD - StudenTs As plaNetary Defenders

Multiplier Events and Community Days

Credit: StAnD











Credit: PRISMA/INAF

Il Cielo A Terra

i.e. The Sky on Earth /
The Sky Lands on Earth

the **first travelling exhibition dedicated to meteorite sites** in **Piedmont** and **Valle d'Aosta**

+

a **unique opportunity** to **discover six Italian meteorites** through **archive materials** and **exact replicas of the originals**







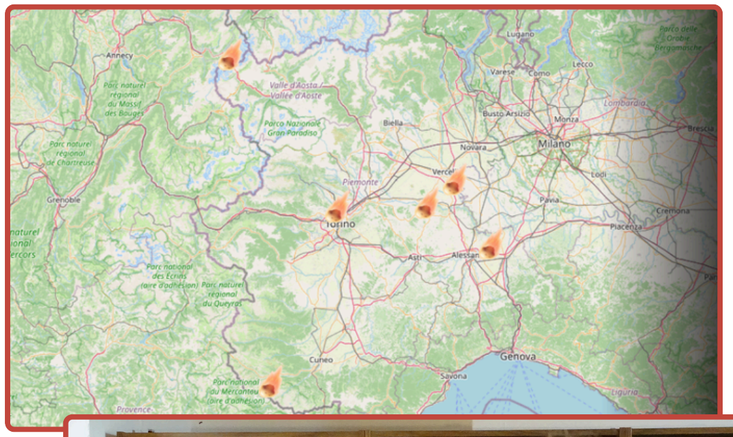


Credit: PRISMA/INAF

Il Cielo A Terra

i.e. The Sky on Earth /
The Sky Lands on Earth

- **Cereseto**, **1840**, ***fall***
- **Alessandria**, **1860**, ***fall***
- **Motta di Conti**, **1868**, ***fall***
- **Entrèves**, **1987**, ***find***
- **Torino**, **1988**, ***fall***
- **Lago Valscura**, **1995**, ***find***









Credit: PRISMA/INAF

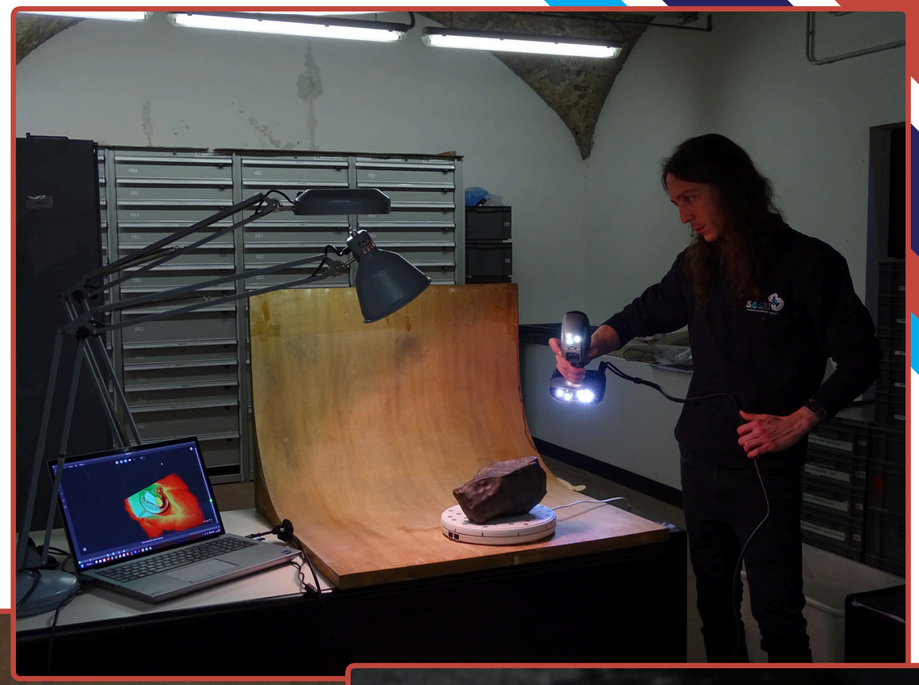
Il Cielo A Terra

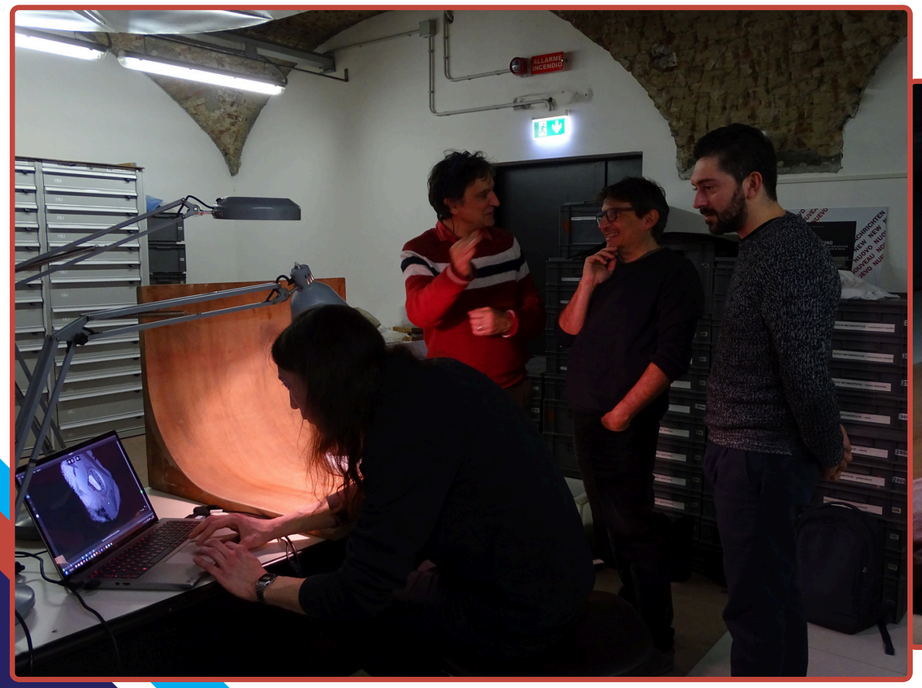
i.e. The Sky on Earth /
The Sky Lands on Earth

- **3D scans**
- **3D prints**

→ **hand-painted** replicas

→ casts with the **specific weight** of the original samples







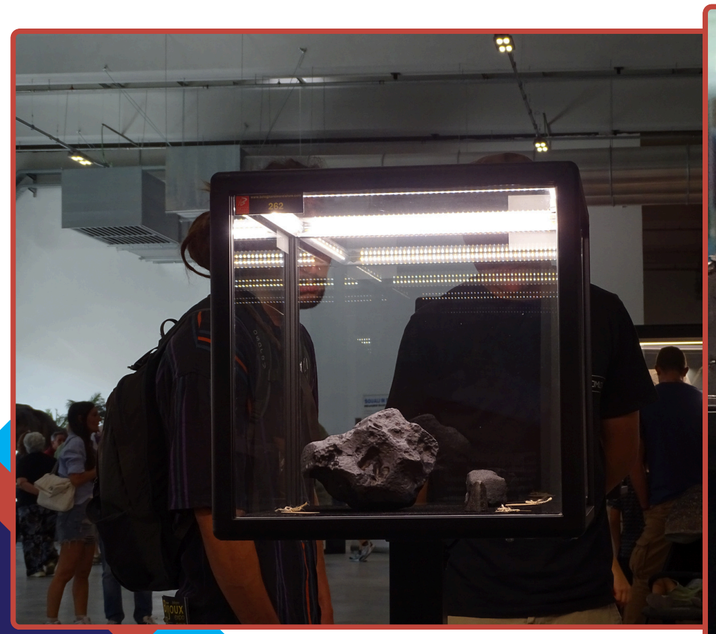


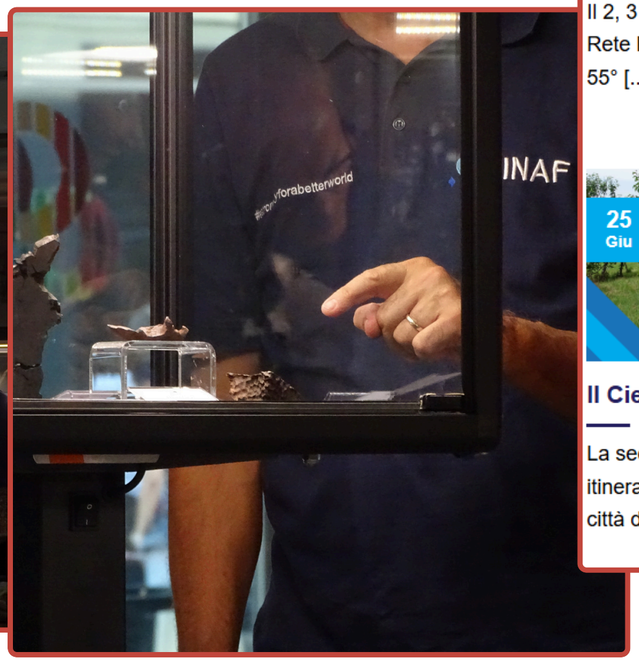
Credit: PRISMA/INAF

Il Cielo A Terra

i.e. The Sky on Earth /
The Sky Lands on Earth

- already travelled to **6 cities**
- **total n° of participants** to date ≃ **14300**
- **a network of collaborations established**
- **new stages coming soon!**







Credit: PRISMA/INAF

PRISMA Research, Outreach, and Dissemination

editorial and **communication plan** that **includes**, **engages** and **showcases** the **PRISMA community** as a whole

How?

- **share with us your** PRISMA-related **activities**
- **include PRISMA** social media accounts **in your communication**, e.g. tags, “collabs”, etc.
- **share** the **links** to the PRISMA website, social media and newsletter



Credit: PRISMA/INAF

\+ *You will **soon** receive a **Gform** meant to **gather** all the needed **information to implement** a **community page** on the **PRISMA website**, **please fill it out!***

Thank you for your attention!



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