



# GENESIS-SKA outreach

How to catch general public, how to engage  
business

Caterina Boccato, Serena Pastore

**INAF**

ISTITUTO NAZIONALE  
DI ASTROFISICA  
NATIONAL INSTITUTE  
FOR ASTROPHYSICS



# Our commitment is to do Communication, Public and Industrial Outreach Activities

The search is on! And SKA will be at the forefront of  
one of humankind's greatest quests

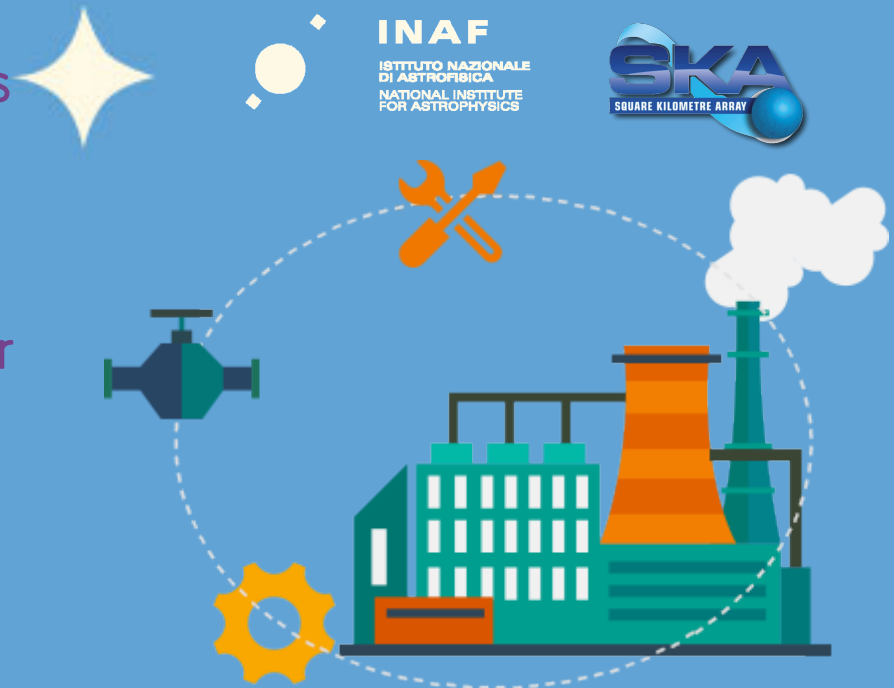
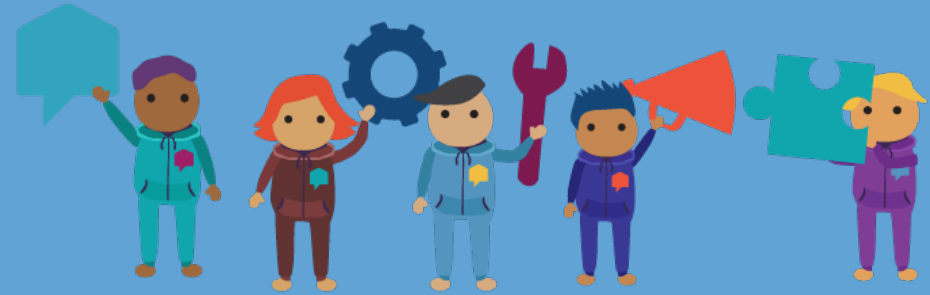
What are the proper  
conditions (chemicals,  
dynamical, environment ...)  
– during the early  
formation phase(s?) of  
planetary systems -  
which can determine the  
rise of life?





# GENESIS-SKA Outreach main goals

1. To communicate and disseminate the main scientific aspects of this project to general public and schools always promoting the image of the National Institute for Astrophysics
2. To develop our activities always working in synergy with the context
3. To study one, or more, actions also for industrial target in order to strengthen the relationship between INAF and national industries



# The importance of being competent



*Being competent in a specific field doesn't mean that a person knows how to do everything in that field, but rather that they know what to do and how to get it done*

# People involved

Caterina Boccato – Padova - Coordination

Ileana Chinnici – Palermo - History

Maria Teresa Fulco – Napoli- School and Society



Alessandra Zanazzi – Arcetri – School and Society

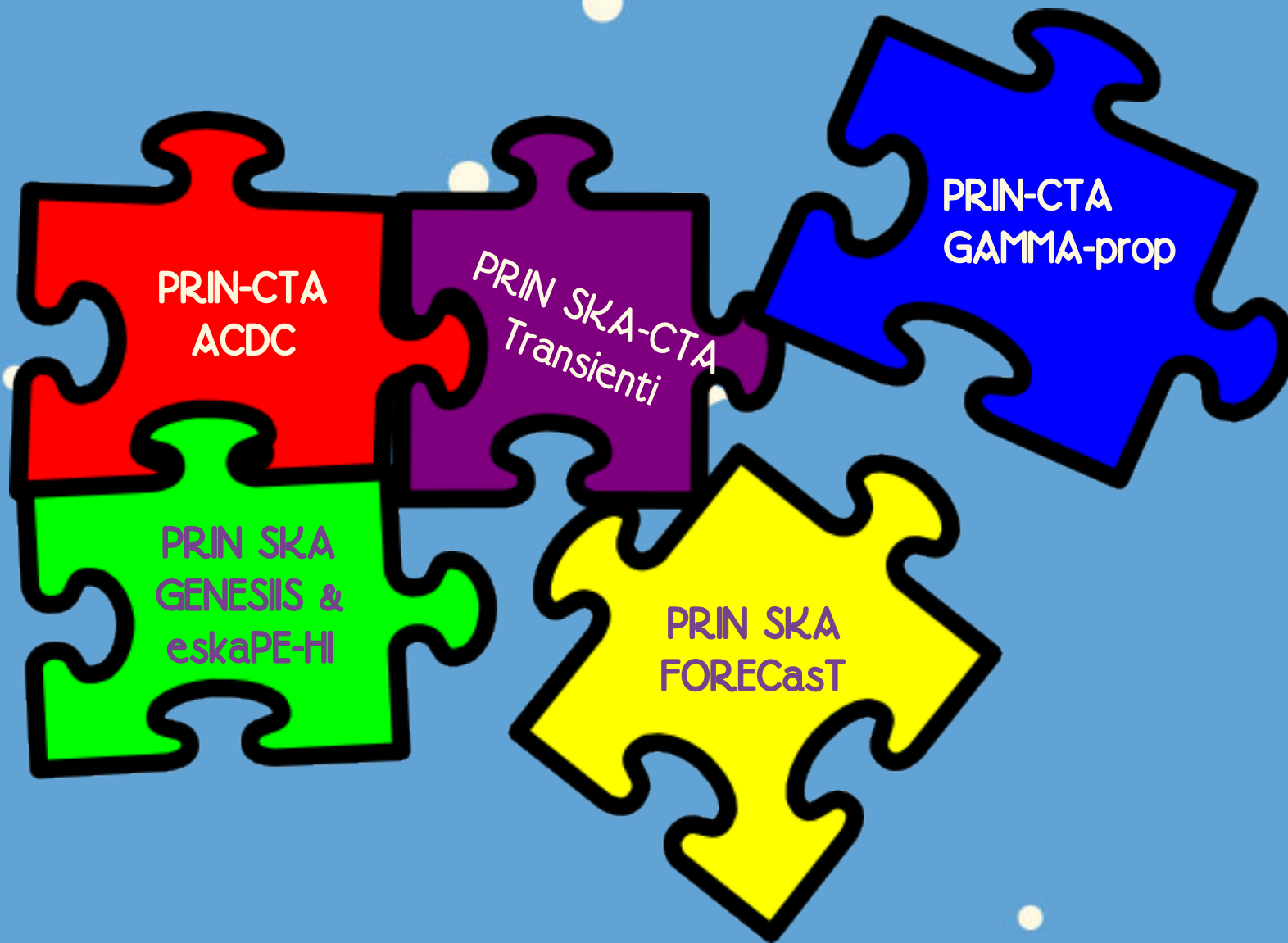
Serena Pastore – Padova . Industry

All of you!

For more than 20 years we have been professional in the field of education and communication in Astronomy and Science

# INAF ROLE

## coordination and optimization





INAF role is much more than “money” and coordination!

## VISION

An organization’s vision describes what the organization hopes to become in the future. Well-constructed visions clearly articulate an organization’s aspirations.

Astronomy for a better world

Conoscere il cosmo per migliorare il mondo

#astronomyforabetterworld

#eduinaf

#inaf



● INAF outreach goal is to establish a positive public image of our Institute



To reach this goal we need to implement internal, or external, best practices in order to grow up as professional community



● We also need to share meanings and objectives

# Actions

- Visual identity
- Virtual reality
- Public talk (e.g. Costellazione Manga)
- Educational - edu.inaf ✨
- Directly from SKA
- Industrial Outreach



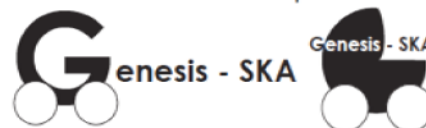
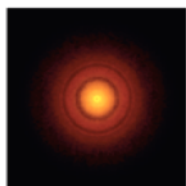
# Visual Identity

Il logo GENESIS - SKA è nato dalla proposta di Francesca Baciotti, rappresenta una carrozzina per l'associazione con il sottoprogramma SKA la "culla della vita".  
Le ruote sono la stilizzazione grafica di un disco protoplanetario.

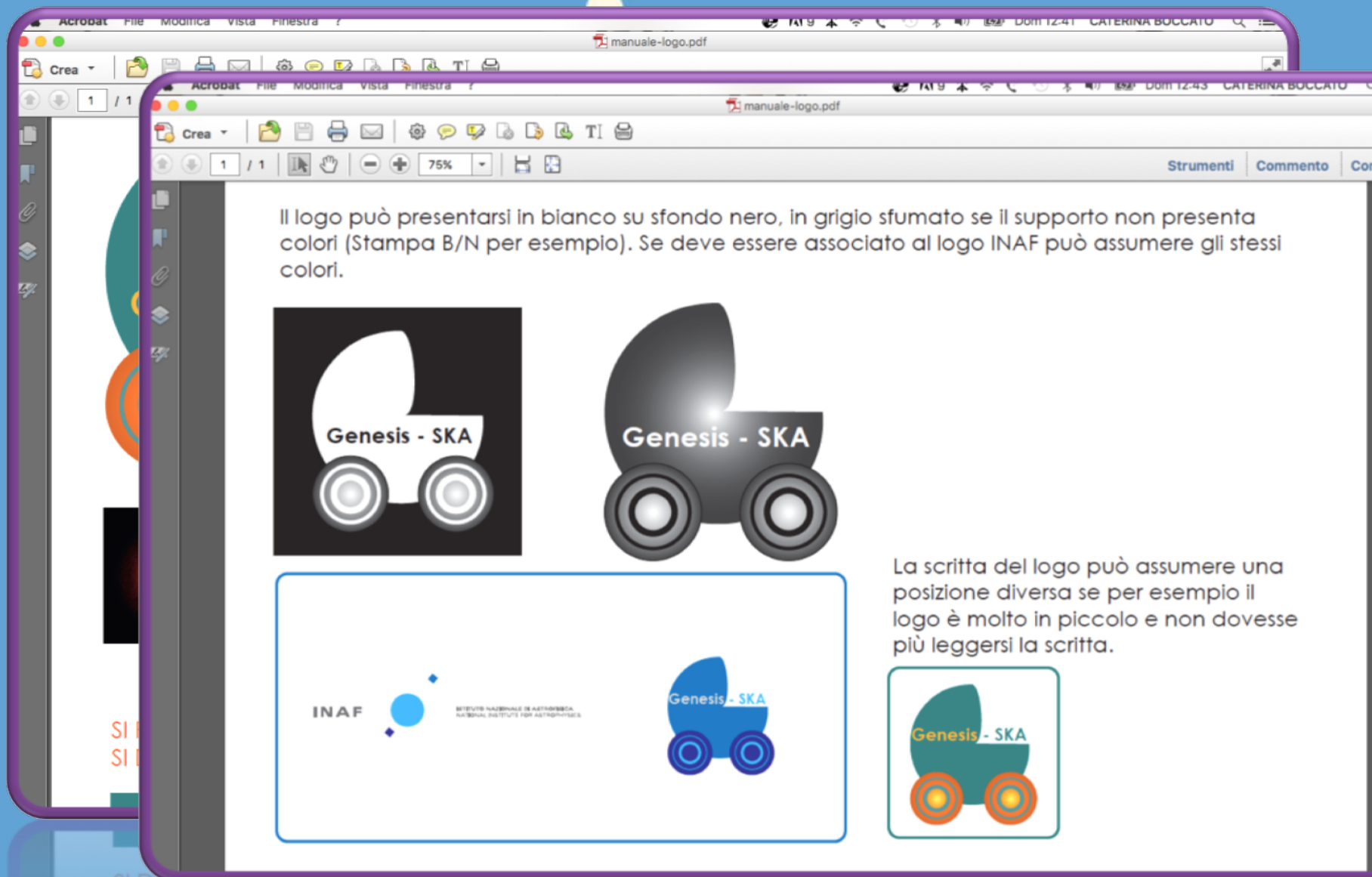
E' stato rielaborato da zero con Adobe Illustrator.  
Si è partiti dal font utilizzato che è **Century Gothic Bold**.  
Il corpo principale della carrozzina è la G di Genesis opportunamente rimodellata dopo essere stata trasformata in tracciato.

Si raccomanda di usare il medesimo font per intestazioni o altri documenti, lì dove possibile.  
Questo documento rappresenta solo dei suggerimenti: il logo può essere utilizzato con diversi gradi di libertà nei colori e associato ad altri font.



SI POSSONO USARE COLORI DIVERSI A SECONDA DEI LAYOUT GRAFICI NEI QUALI SI DEVE INSERIRE IL LOGO.





# Visual Identity



Il logo può presentarsi in bianco su sfondo nero, in grigio sfumato se il supporto non presenta colori (Stampa B/N per esempio). Se deve essere associato al logo INAF può assumere gli stessi colori.

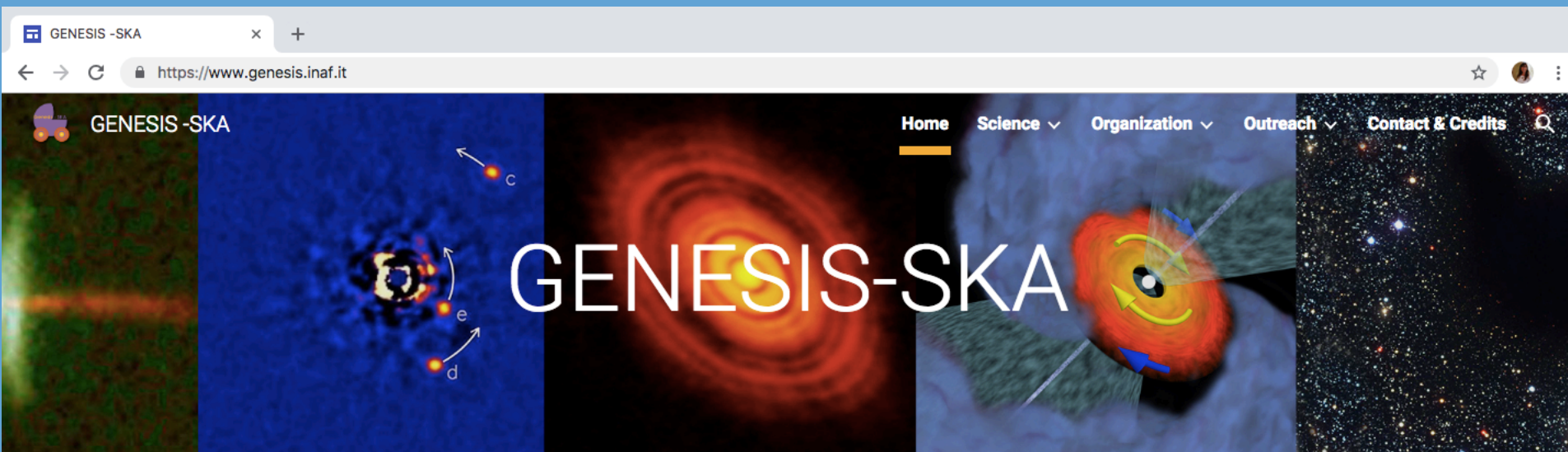


La scritta del logo può assumere una posizione diversa se per esempio il logo è molto in piccolo e non dovesse più leggersi la scritta.



# Web site

[www.genesis.inaf.it/](https://www.genesis.inaf.it/)



## General conNditions in Early planetary Systems for the rISe of life with SKA

C. Codella<sup>1</sup>, J.M. Alcalá<sup>2</sup>, A. Ciaravella<sup>3</sup>, R. Gratton<sup>4</sup>, G. Lodato<sup>5</sup>, B. Nisini<sup>6</sup>, M.E. Palumbo<sup>7</sup>, D. Turrini<sup>8</sup>, C. Boccato<sup>4</sup>, L. Testi<sup>9</sup>, and the **GENESIS team**

The recipe to make a habitable planet like our own Earth requires a relatively small rocky planet, at the right distance from the host star, with a not too thick atmosphere rich in volatiles and capable of developing complex organic chemistry. The GENESIS-SKA project, supported as PRIN-INAF, is carrying on studies of planet formation, and pre-biotic chemical complexity, in the context of preparation of SKA Key Programmes. More specifically, we are featuring



# Virtual Reality

WOW factor

We are involved in two big science projects which are not still physically realized



# The previous is a popularization activity

What does popularization mean?

Communication activity (formal or informal) towards general public

Dissemination (outreach) objectives

Science as shared environment, connections and entertainment

1. tickle citizens' interest about results and methodologies

2. allow citizens and scientists dialogue

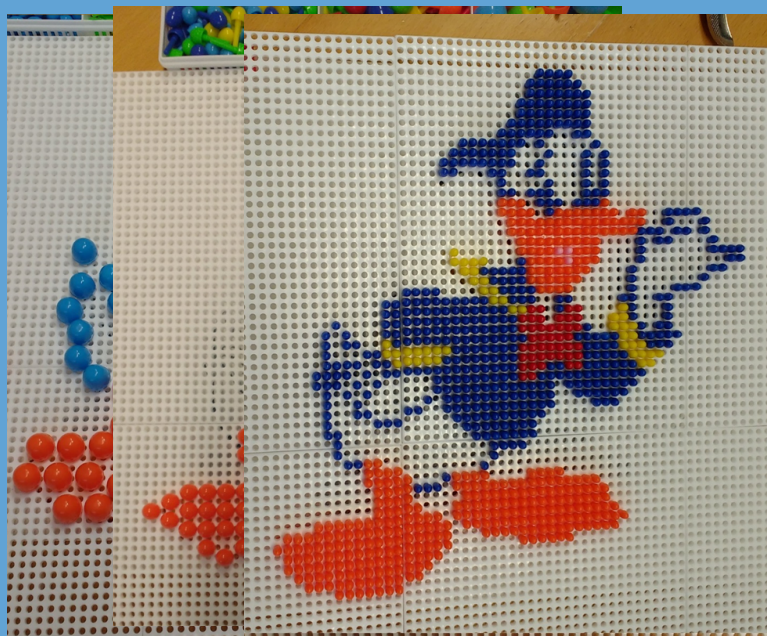
3. facilitate the citizens' participation to the cultural process

4. stimulate critical thinking

# Then, we plan and/or perform educational activities

Designing and TESTING educational activities related to INAF - SKA projects - FORMAL

Propose SKA science to unconventional audience with different background and interests - INFORMAL



**Daria Dall'Olio**  
PhD student, Chalmers University

with  
**Piero Ranalli and  
Alessandro Montosi**

**COSTELLAZIONE  
MANGA**

LE STELLE NEL FUMETTO  
E NEL CINEMA DI ANIMAZIONE  
GIAPPONESE



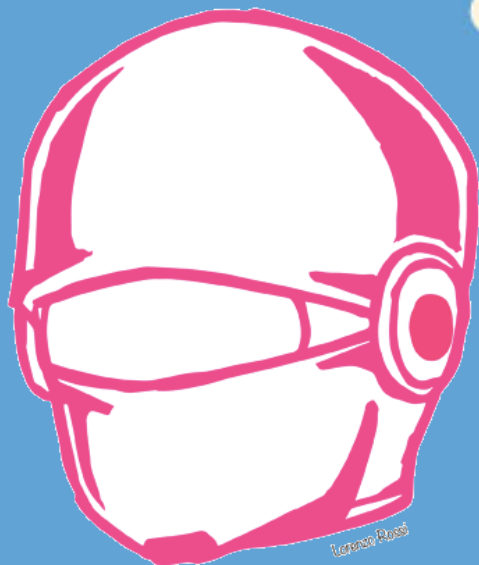
# Talk for general public

Notti d'estate ad Arcetri 2018

MARTEDI 4 SETTEMBRE

21.15

**COSTELLAZIONE MANGA**  
LE STELLE NEL FUMETTO E NEL CINEMA  
DI ANIMAZIONE GIAPPONESE



Daria Dall'Olio, Chalmers University of Technology di Göteborg,  
e Claudio Codella, INAF Osservatorio Astrofisico di Arcetri





# Ufo Robot Grendizer

stars, planets, planetary nebulae



What is a star? What is a planet?

And a planetary nebula?

Vega: does it really have a planetary system?



# Costellazione Manga: *the core pillars*

Costellazione Manga is an **efficient pedagogical tool** to popularise and communicate astronomy.

**Common language** of anime and manga

**Comparison between fiction and science**

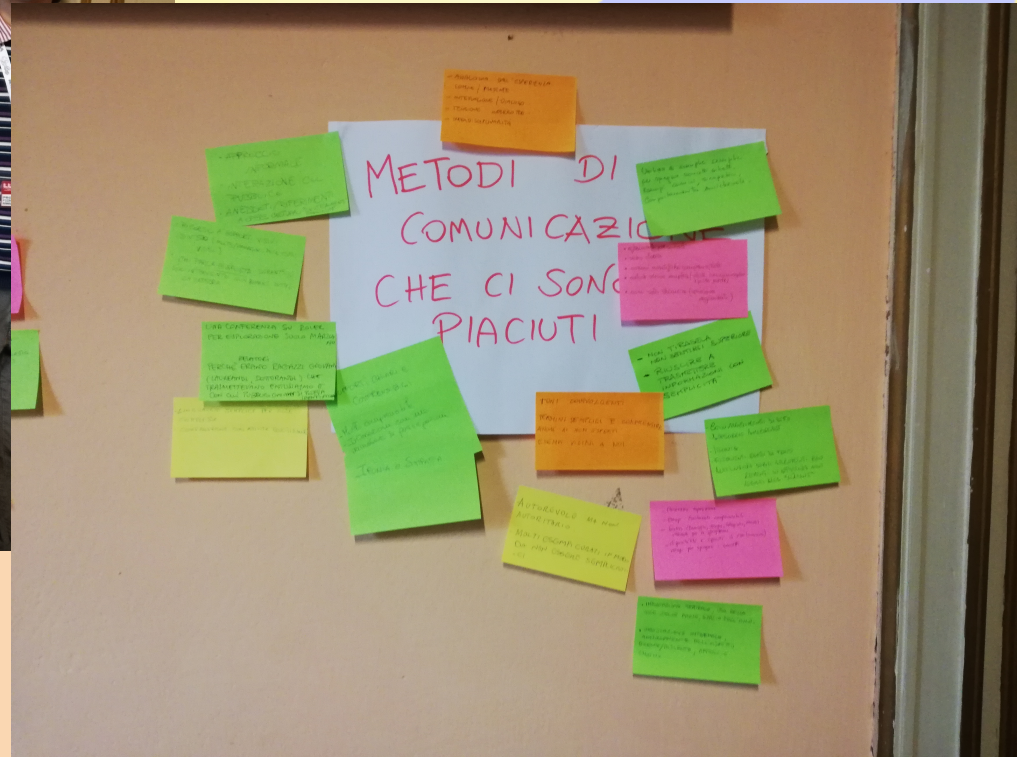
- **stimulates critical thinking** and curiosity,
- **motivates** people to learn more about astronomy,
- helps people to **remember** concepts,
- **builds connections** between different topics.

# Costellazione Manga: the core pillars

Costellazione Manga is an **efficient pedagogical tool** to popularise and communicate astronomy.



anime and manga

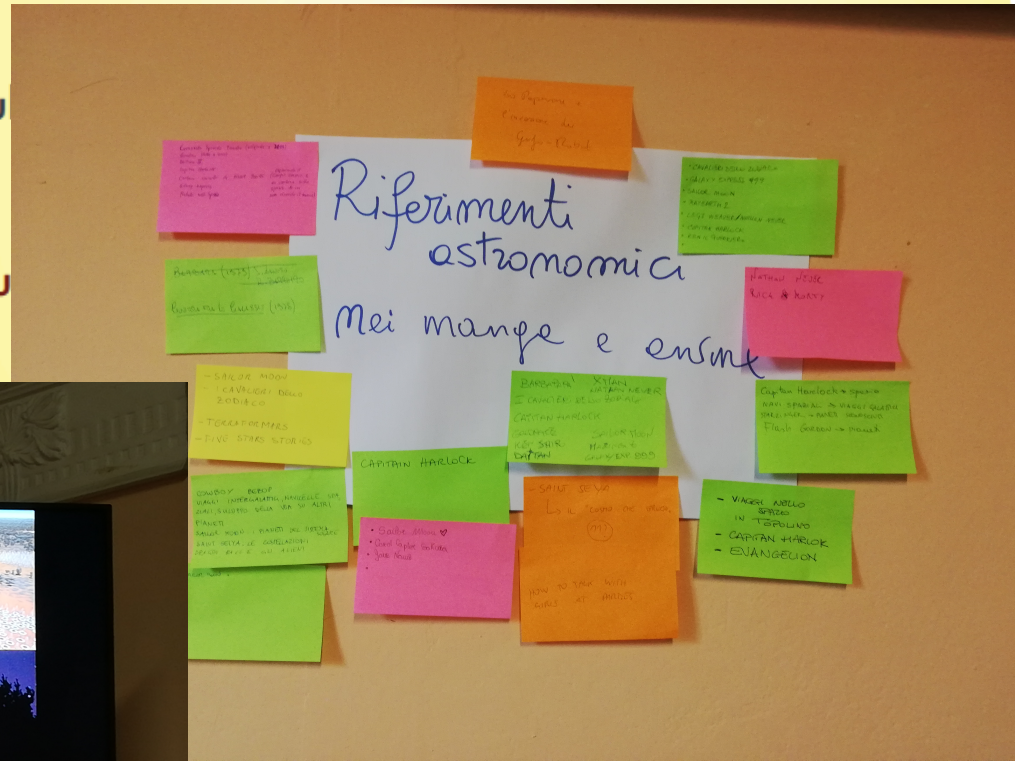




# Costellazione Manga: the core pillars

Costellazione Manga is an efficient pedagogical tool to popularize astronomy

Common language



connections between different topics.

# Education goal is to make school the first tool to understanding the world

- tickle pupils' and teachers' interest
- link school curricula to contemporary research
- stimulating critical thinking
- spread the scientific method





# AstroEdu and Edu.inaf.it

The screenshot shows the Edu INAF website. At the top, there are navigation buttons for 'Risorse Didattiche', 'Eventi', and 'Notizie'. The main header features the 'EDU INAF' logo and the text 'Risorse e iniziative per la scuola e la società dell'Istituto Nazionale di Astrofisica'. Below this is a blue navigation bar with links: HOME, DIDATTICA, INAF E SOCIETÀ, RETE IRNET, EVENTI, NOTIZIE, RUBRICHE, CHI SIAMO. A search bar is located below the navigation bar. The main content area is divided into two columns. The left column features a large image of a smartphone with a green sine wave graph on its screen, with the text 'Fisica con lo smartphone' and 'EDU INAF' below it. The right column has a section titled 'EVENTI' with a list of events: 'Col Favore del Buio: il Parco delle stelle - Loiano', 'Col favore del buio: Eclissi totale di Luna - Bologna', 'Storia di un neutrino', 'A caccia di suono e luce con onde gravitazionali e fotoni', and 'Sotto lo stesso cielo?'. Below the events is a section titled 'GUARDA ANCHE' with the 'ASTROEDU' logo and the text 'Attività didattiche di astronomia peer-reviewed'. At the bottom of the page, there are several small thumbnail images representing different educational resources.

The poster features a dark blue background with a starry sky. At the top, there is a logo for 'EU UNIVERSE AWARENESS' consisting of a stylized figure with a spiral and stars. Below the logo, there is a silhouette of a large radio telescope dish with several people sitting on top of it, looking up at the sky. To the right, there is a smaller satellite dish. At the bottom of the poster, the text 'THE INVISIBLE UNIVERSE' is written in a large, white, sans-serif font.



# FUTURE ACTIVITIES

## GENESIS Labs

Labs can contribute to educational material of big interest for schools because they are interdisciplinary. In fact they play a crucial role into the study of very simple molecules, in particular the Formamide, which is important to understand:

1. the processes that bring to the formation of prebiotic elements and
2. how they survive in the different astrophysical environments subjected to cosmic radiation and cosmic rays

## Infographic with LED light effects





*The Cosmic Adventures of Alice & Bob* is a fully-illustrated comic book that was produced by CAASTRO, the Australian Research Council Centre of Excellence for All-sky Astrophysics, to communicate ideas about science research, innovation, and astronomy to primary school children. The book can be read on a number of different levels and the classroom ideas presented here can be adapted to the various interests and abilities of students. The book is most suitable for children in Years 3 to 6, but this could be extended to Year 2 and Years 7 and 8 depending on individual students







THANKS!

Questions?

[caterina.boccatto@inaf.it](mailto:caterina.boccatto@inaf.it)  
[serena.pastore@inaf.it](mailto:serena.pastore@inaf.it)

