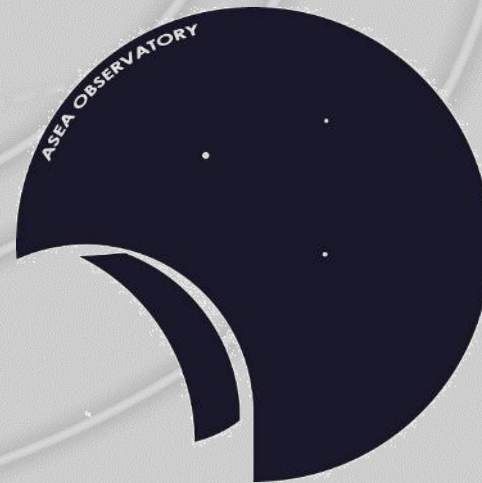




# ASTROPHYSICS ASSOCIATION OF ASEA (SASA)

Presentation of the association and  
construction of the observatory





# HISTORY OF ASEA



- The name Asea comes from Aseatas, son of the Arcadian king Lykaon
- First Asean innovation was in pottery painting and is dated back to 5500 B.C.
- There are two ancient temples on the pinnacle of Mount Lias, one to Athena and another to Poseidon (dated 570-540 B.C.)
- Asea is the village of Nikos Gatsos, one of the most well known contemporary Greek poets



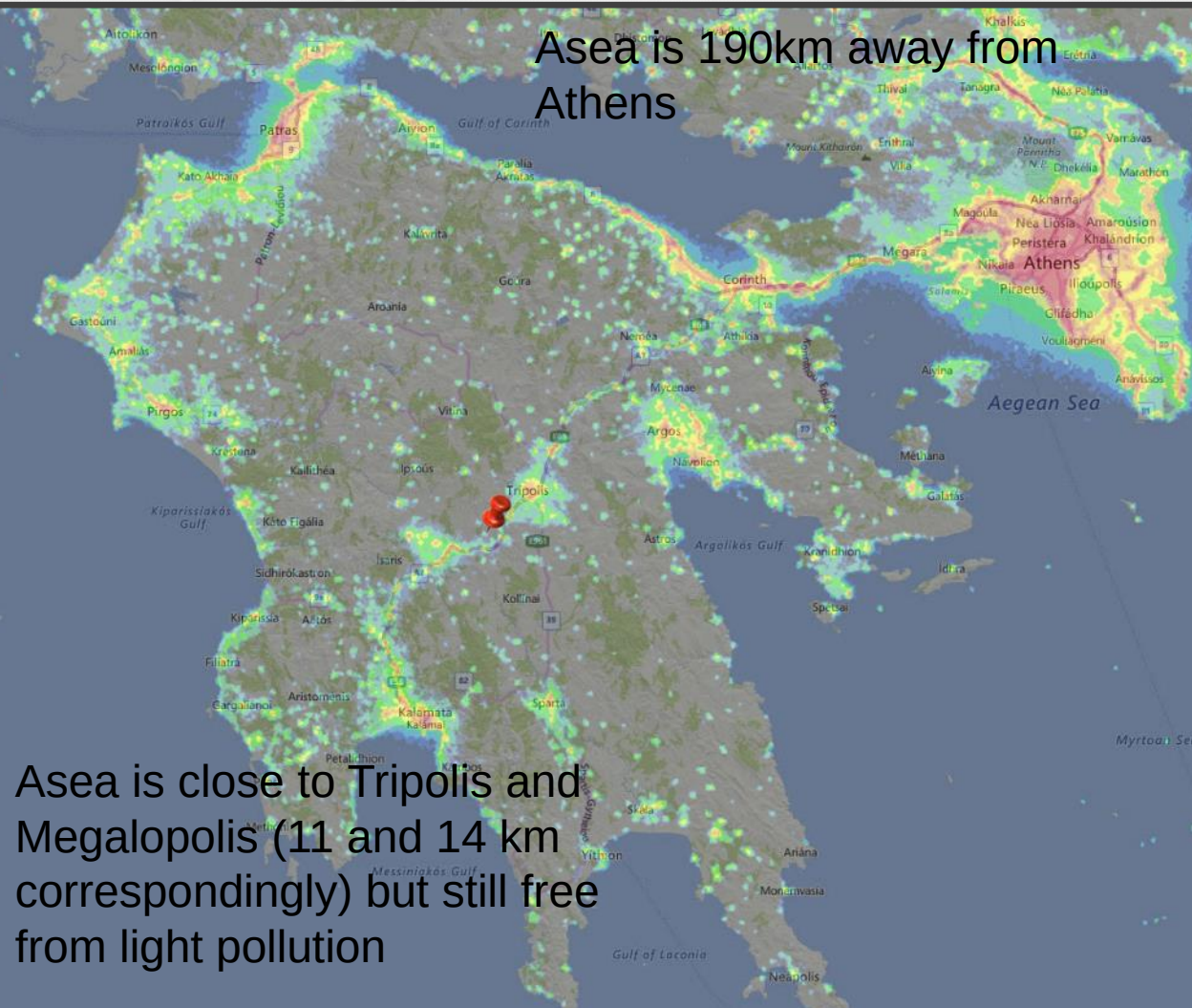
Asean coin depicting  
Demeter the  
Panachaian



# LOCATION OF ASEA



Asea is 190km away from Athens



Asea is close to Tripolis and Megalopolis (11 and 14 km correspondingly) but still free from light pollution



View of the village of Asea



# HISTORY OF SASA



- SASA is a non profit scientific and research association of physicists, mathematicians, chemists and engineers
- Our purpose is the dissemination and propagation of STEM knowledge to residents of the wider Arcadian region and especially to young students
- SASA exists from 2013, but was formally founded in 2015. Today, it numbers 25 regular members

# ACTIVITIES OF THE ASSOCIATION



- Observations, summer courses of STEM with emphasis on experimentation, workshops and speeches on modern scientific discoveries
- Promotion and supporting scientific research in the space sector (rocketry, CANSAT, spectrometry and other fields)
  - Study and research of relevant local elements of astronomy, especially tied to the cultural heritage of the region
  - The construction, maintenance and operation of the Asean Observatory



# THE ASEAN OBSERVATORY

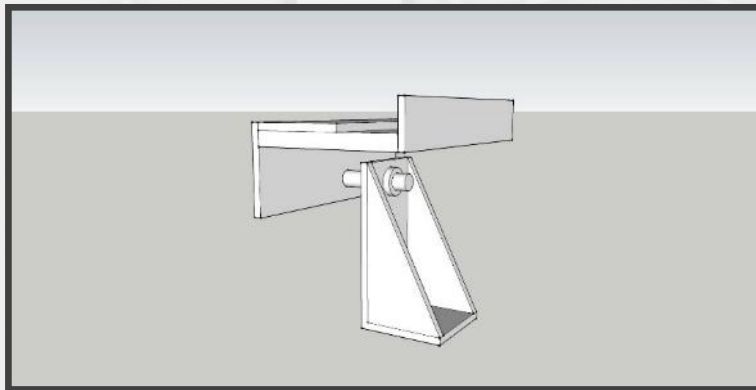


34 months of  
planning

7 months of  
attracting  
funding

5 months of  
manufacturing  
and construction

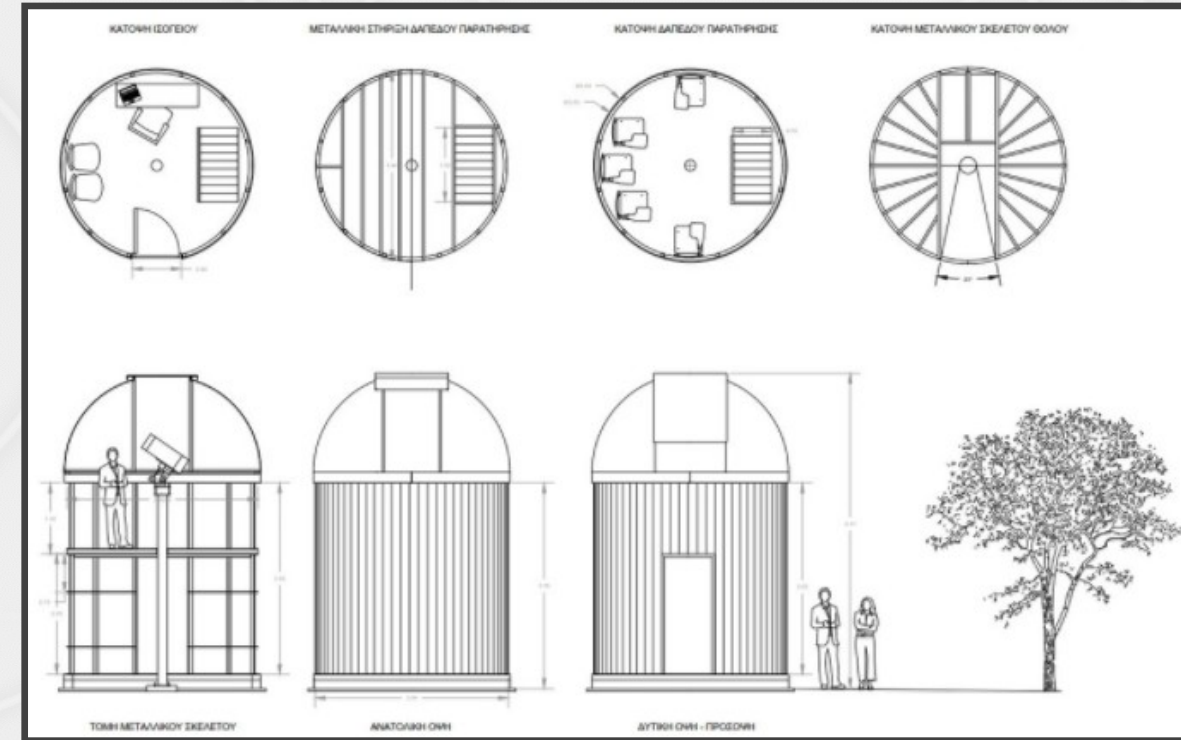
15000€ in  
materials



# DESIGN OF THE OBSERVATORY



- The vision for the construction of the observatory was conceived in 2014
- The most challenging part was the construction of the dome



Design of the observatory



# THE DOME CHALLENGE



- Due to budgetary constraints, we decided to perform the first ever dome geometrical solution and construction from engineers in Greece
- The most affordable commercial dome was priced at 28000€





# THE DOME CHALLENGE



- Waterproof dome construction with moving parts (rotation / openings) is apparently very challenging!
- Absence of Greek literature on dome construction and the associated geometry
- We had to design the dome perfectly to avoid “on the fly modifications”





# CONSTRUCTION



The metal frame of the observatory's building and the dome were constructed in Athens, dismantled and then transported in parts to Asea where it was installed again





# CONSTRUCTION



- The observatory was constructed by the engineers and other members of the Association with no access to heavy equipment.
- All the parts were calculated to weigh less than 60 kgs so they could be lifted by hands alone





# CONSTRUCTION



- The observatory is removable.
- The law requires constructions in public places to be removable
- Constructing a prefabricated and removable observatory was another great challenge in the construction adventure



# INSTALLING THE CLADDING



The site of construction is a beautiful hill next to Asea's school so we decided to close the metal frame with wood to create a better harmony between the building and the surrounding landscape





# INTERIOR OF THE OBSERVATORY



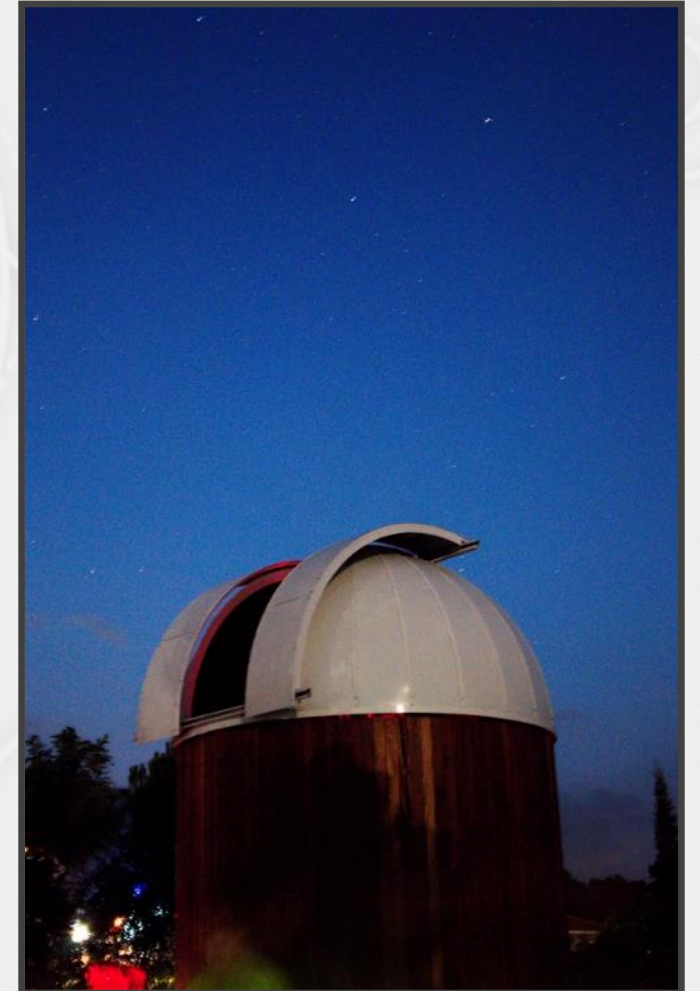
- The use of wood in the construction, created a very friendly, comfortable and humane interior environment
- The floor of observation can accommodate 12 people sitting.



# COMPLETION!



- The dome was assembled and erected on July 2nd, 2017. The first light in the main telescope was achieved the same night
- From that day and forward the observatory is fully operational
- Improvements are scheduled for December 2017 and April 2018 as soon as the necessary funding is achieved





# OPENING NIGHTS



- 7 August 2017, lunar partial eclipse. The first big astronomical event attracted more than 600 people. The association deployed 4 telescopes
- The entrance in the observatory is always free of charge
- The average time of observation of every visitor is 40 sec (8-10 times longer than usual for observatories in Greece)





# OPERATION



- The entrance in the observatory is always free of charge
- The average time of observation of every visitor is 40 sec (8-10 times longer than usual for observatories in Greece and depends on the attendance)

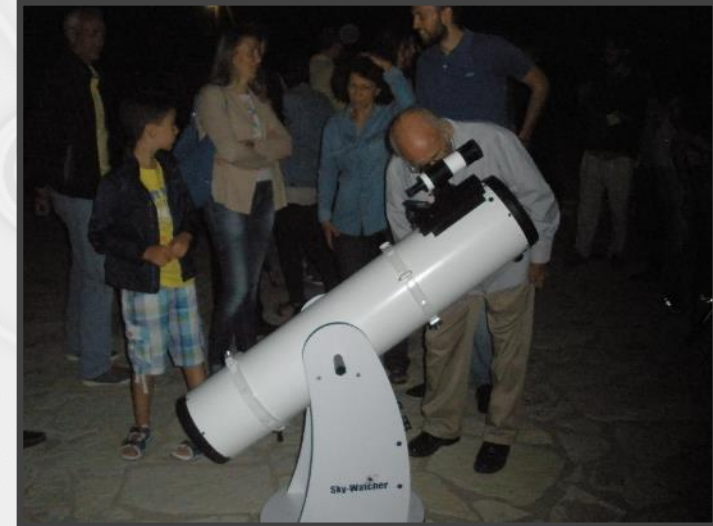




# LOCAL PRESENCE



The association transfers the portable telescopes to remote villages and organises speeches and astronomical nights, providing people of every age group the opportunity to look through a telescope for the very first time in their lives





# ASTRONOMY SOIREEES



The 3<sup>rd</sup> Astronomy Soirée was conducted successfully with over 250 attendants

- The attendants were educated in the basics of the theory of relativity, our solar system and were instructed in astronomical observation
  - Visitors arrived from many areas outside Arcadia



# ASTRONOMY SOIREEES



Many successful Astronomy Soirées have been conducted to this day, since it is one of our regular events, taking place 3-4 times per year

**5Η ΑΣΤΡΟΝΟΜΙΚΗ ΒΡΑΔΙΑ**  
*ΕΙΜΑΣΤΕ ΜΟΝΟΙ ;*  
ΤΟ ΠΑΡΑΔΟΞΟ ΤΟΥ ΦΕΡΜΙ ΚΙ Η ΖΩΗ ΣΤΟ ΣΥΜΠΑΝ.

Έναρξη 20:30




Κερασάρι, 6 Αυγούστου 2016  
Ασέα, 7 Αυγούστου 2016

Θα ακολουθεί παρατήρηση με τηλεσκόπια.

ΣΥΛΛΟΓΟΣ ΑΣΤΡΟΦΥΣΙΚΗΣ ΑΣΕΑΣ, ΕΙΣΟΔΟΣ ΔΩΡΕΑΝ

31-7-15  
ΑΣΕΑ

**ΜΠΛΕ ΣΕΛΗΝΗ**  
Έναρξη 22:00



- Πώς γεννήθηκε η Σελήνη
- Παρατήρηση του κρατήρα Tycho και της θάλασσας της Ηρεμίας σε μεγέθυνση 500x

ΣΥΛΛΟΓΟΣ ΑΣΤΡΟΦΥΣΙΚΗΣ ΑΣΕΑΣ - ΕΙΣΟΔΟΣ ΔΩΡΕΑΝ - astroasea.weebly.com

ΔΙΑΛΕΞΕΙΣ :

- Η ΨΕΥΔΑΙΣΘΗΣΗ ΤΟΥ ΧΡΟΝΟΥ
- Η ΚΑΤΑΚΤΗΣΗ ΤΩΝ ΠΛΑΗΝΤΩΝ ΚΑΙ ΠΑΡΑΤΗΡΗΣΗ ΜΕ ΤΗΛΕΣΚΟΠΙΑ

7 ΑΥΓΟΥΣΤΟΥ, ΚΕΡΑΣΤΑΡΙ  
8 ΑΥΓΟΥΣΤΟΥ, ΑΣΕΑ

**4η ΑΣΤΡΟΝΟΜΙΚΗ ΒΡΑΔΙΑ**  
Έναρξη, 20:30



ΣΥΛΛΟΓΟΣ ΑΣΤΡΟΦΥΣΙΚΗΣ ΑΣΕΑΣ - ΕΙΣΟΔΟΣ ΔΩΡΕΑΝ - astroasea.weebly.com

Each evening features speeches by young and distinguished scientists on thematic areas such as lunar observation, the origins of life, the Fermi Paradox and many other exciting topics



# ASTRONOMY SOIREEES

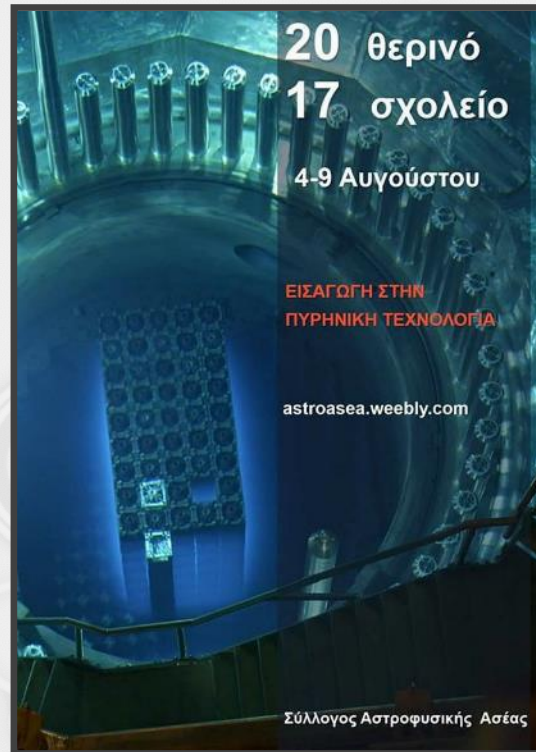


Some photos of the Soirées held in 2016





# SUMMER SCHOOLS



- Apart from astronomy, each year we organize summer schools aimed at young students – of course, everyone is invited!
- Summer schools usually feature 5 days of lessons, including workshops on STEM



# SUMMER SCHOOLS



Two courses  
were available for  
this year:

Introduction to  
astrophysics

and

Introduction to  
nuclear  
technology



Apart from theory, both courses featured workshops on practical skills such as instrument calibration and operation



# LUNAR OBSERVATION



Lunar eclipses are always a source of excitement, especially when occurring in August!



This year, completion of the observatory coincided with the eclipse in August and it was a perfect opportunity to introduce ourselves to Arcadia

**ΕΚΛΙΨΗ ΣΕΛΗΝΗΣ**  
7 ΑΥΓΟΥΣΤΟΥ 2017

ΕΝΑΡΞΗ 20:30

ΑΣΤΕΡΟΣΚΟΠΕΙΟ ΑΣΕΑΣ

ΣΥΛΛΟΓΟΣ ΑΣΤΡΟΦΥΣΙΚΗΣ ΑΣΕΑΣ - ΕΙΣΟΔΟΣ ΔΩΡΕΑΝ - astrosea.weebly.com



# LUNAR ECLIPSE, AUGUST 2017



Despite being held in the midst of high holiday season, the event was a resounding success, attracting over 700 visitors from all over Peloponnes



We thank everyone for attending and their warm reception and kind words towards our efforts!



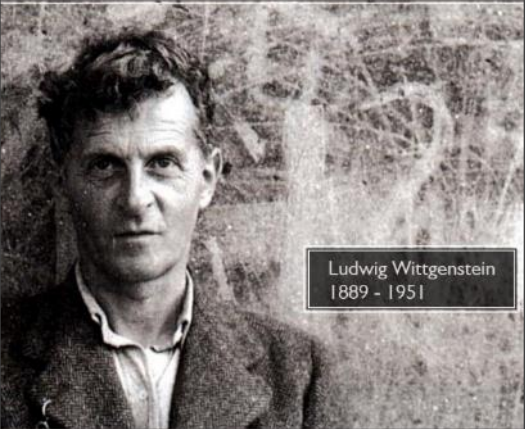
# PRESENCE IN ATHENS



- For the Arcadians living in Athens, the association organized a speech in NTUA (National technological University of Athens) in September 2017
- The speech was recorded and uploaded in YouTube (1600 views and counting)
  - More than 400 people attended



Η Αξιωματική Μέθοδος και τα όρια της ανθρώπινης αντίληψης.



Ludwig Wittgenstein  
1889 - 1951

Σχολείο Ασέας, Σάββατο 23 Σεπτεμβρίου 2017  
Έναρξη 20:00

Θα ακολουθήσει επίσκεψη στο αστροσκοπείο  
ΣΥΝΔΡΟΜΟΣ ΑΣΤΡΟΦΥΣΙΚΗΣ ΑΣΕΑΣ - ΕΙΣΟΔΟΣ ΔΩΡΕΑΝ - astrosea.weebly.com



## SUMMARY – CONCLUSIONS - HIGHLIGHTS



- SASA disseminates STEM knowledge in the Arcadian region since 2013
- A prefabricated observatory was constructed and installed in Asea to support the association's activities
- Despite trying times, public response to our efforts has been emphatic
- We will redouble our efforts for 2018 and onwards, even though SASA is dependent only on the commitment on its members
  - All our work is provided voluntarily by professional scientists and engineers



# OUR GOALS FOR THE FUTURE



...on the short term:

- to introduce STEM and especially astronomy to the Arcadian population
- to connect to other associations across Europe
- to generate scientific knowledge in the field of astronomy
- to secure funding in order for the association to continue its work

...on the long term:

- to increase the number of Arcadian scientists and the overall education level of the region
- To transform Arcadia into a region of international astronomical importance