



NEWSLETTER  
No3/ March 2013



# discover the COSMOS

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## Introduction



**By Prof. Kourkouveli  
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*Dear All,*

*We would like to welcome you in the 3rd issue of Newsletters of the "Discover the COSMOS" EU funded project. In this issue you can have a quick but concrete view about the Discover the COSMOS lead stories including: news, contests, workshops, dissemination events and activities and our agenda of upcoming initiatives that our project partners and collaborators are elaborating throughout the life cycle of the project.*

*The project:*

*The "Discover the COSMOS" coordination action has reached its 19th Month (24 months total duration) and it provides a great number of educational resources (80.833 educational content and 549 learning activities so far) for science teachers and students through its [portal](#).*

*The Discover the COSMOS community welcomes you to participate in its activities!*

*We hope that you will enjoy the 3rd Issue of Discover the COSMOS newsletter!*





## Lead Stories

### **2012DA14 asteroid seen from Spain**

LA HITA ASTRONOMICAL COMPLEX 17/02/2013

Friday 15th of February in the afternoon, La Hita astronomical (Toledo, Spain) complex brought together a number of people for an unusual observation. The observatory registered 2012DA14 asteroid using a 80mm telescope. This event took part in the frame of La Hita Observatory program of activities that aims to promote knowledge about Astronomy and let the community in general learn through the eyes of science.

\* recording can be seen in the following link:  
[http://www.youtube.com/watch?feature=player\\_embedded&v=EviX1f371Bo](http://www.youtube.com/watch?feature=player_embedded&v=EviX1f371Bo)



### **UCM develops a contest targeting Spanish-speaking sciences teachers**

Currently, Discover the COSMOS is holding a contest on educational scenarios developed by Spanish-speaking sciences teachers. The contest: "["El Universo a tu manera"](#)" or in English: "The Universe at your own way" is being carried by Universidad Complutense de Madrid (UCM) from Spain.

Inscriptions are open since **February 1st** and will be available until **May 31st, 2013**.

The aim of this contest is to motivate teachers on developing new educational scenarios

derivate from the original ones that Discover the COSMOS makes available. Teachers are given examples of educational scenarios promoting an inquiry-based science education and, based on them, are asked to propose original new scenarios using interactive applications, e-tools for Astronomy and science repositories.



Thus the contest is being launched in Spain, the participation is focused on any Spanish-speaking teacher, thinking for example on Latin American science teachers. This opens a wide bunch of possibilities for networking and sharing experiences throughout distant but close related classrooms.

Moreover, the contest on educational scenarios that UCM is carrying collaborates directly (as a member of the Jury) with León J. Restrepo Quirós, a Colombian engineer that works on interactive educational contents for secondary school proposes. The contest also counts on Rosa Doran (NUCLIO, Portugal) as a member of the Jury.

The aim of networking brings UCM to collaborate with the Royal Spanish Society of Physics (Real Sociedad Española de Física - RSEF, by its name in Spanish) for dissemination purposes. The best educational scenario will be awarded with a 300€ prize.

Awards will be given during the **XVIII Bienial Reunion** of the RSEF on **July the 19th, 2013** in Valencia, Spain.

### UK - National teacher competition

Do you want the chance to win a free place (includes travel, accommodation, meals and

course fees) at the Discover the COSMOS summer school in Volos (Greece), together with a science resource pack for your school? Take part to this competition and you will have your chance to win a free place in the Discover the COSMOS summer school.

Deadline: **Wednesday 24/4/2013**



### UK- National Student competition

Do you want the chance to **name an asteroid**? Would you like to **own your own meteorite**? Then get your thinking caps on and try to come up with a good name for an asteroid recently discovered by the [Faulkes Telescope Project](#).

Deadline: **Wednesday 24/4/2013**



### Teacher training workshop in UK

Date: 4 January 2013

Place: University of Reading, Berkshire – ASE conference

Participants: 18 Teachers from UK schools & colleges, 3 PGCE students, 9 Teachers/visitors from Norway, 2 Teachers/visitors from Korea, 2 University teachers.

The workshop ran from 11am – 1.00pm and included:

- Brief Intro Talk to outline particle physics research at the LHC at CERN and principles of particle detectors



- Workshop – using Minerva software to detect W and Z decays and also to measure the mass of the Z boson

Accompanying teachers left with a resource pack, including a memory stick with all talks, worksheets and software.

The UK student and teacher competitions were also introduced and flyers given out:

- Name an asteroid
- Teachers video competition



## Workshop in Spain

### Reflection workshop on Astronomy educational scenarios: Hand-On Universe - Spain

Date: 28 February 2013. 18:00h

Place: WSO-UV, FISAC building, Escuela Universitaria de Estadística, UCM (Madrid)

Target group: The workshop targets secondary and high school sciences teachers (Physics, Chemistry, Maths, ICTs)

Universidad Complutense de Madrid (UCM) organized a reflection workshop with secondary school teachers on the wiki-based platform of Hands-On Universe (Spain). The wiki site has been upgraded few months ago and has published many learning activities proposed by Discover the COSMOS team and translated into Spanish by UCM partner. The wiki is an excellent tool for engaging Spanish-speaking teachers and also a reference for many Latin American colleagues, so the workshop was a source for reflecting on wide networks of teachers.

The main reflection about it was the possibility of extending a Spanish-speaking community of active innovative teachers and the cooperation on developing original and/or derivate educational scenarios on astronomy from both seashores of the Atlantic.

The workshop took part both on-site at UCM offices and on-line where teacher-trainers and researchers from Medellín (Colombia) attended and participated. A total of 14 attendees among teachers, teacher trainers and researchers shared experiences through a 'hangout' using Google+ that was streamed live via YouTube. The workshop can be seen recorded in the following link:

[http://www.youtube.com/watch?feature=player\\_embedded&v=-wmE8VfgTMA](http://www.youtube.com/watch?feature=player_embedded&v=-wmE8VfgTMA)



Medellín is a hot spot of researchers and teacher trainers interested on innovative educational activities. Thanks sharing a common language, UCM keeps a network since years ago with them.

During the workshop, experiences about the educational content, the possibilities and challenges for the future and the use teachers

make of them were shared. We discussed them with researcher from San Buenaventura University, Parque Explora (science outreach and dissemination center) and Planetario de Medellín (the city's planetary installation).

### ***Hangout with CERN and Google Science Fair: Snapshots of the Invisible***

Date: 21 February 2013

A Google Hangout was organized by CERN and Google Science Fair. High school students from *Ellinogermaniki Agogi* (Discover the COSMOS project partner) have participated in this event and had the chance to learn more about the experiments in CERN and to exchange ideas with the event's participants.

The Google Hangout **video** can be found [here](#).



### ***ATLAS Virtual Visits 2012-2013***

Discover the COSMOS project introduced integrated local Masterclasses, ATLAS Masterclasses with virtual visits. Many of these schools that took part in virtual visits will also visit CERN in the future.

Here is the schedule of the already implemented virtual visits.

#### **2012**

Number of visits: 47

Number of countries: min 15

Number of Discover the COSMOS activities: 8 (17%) - UK (1), Greece (5), Germany (1) and the Netherlands (1).

#### **2013**

Number of visits (up to March 15<sup>th</sup>): 17

Number of countries: 8

Number of Discover the COSMOS activities: 4 (all in Greece and all linked with Masterclass)

The table below provides a summary of the 8 Discover the COSMOS activities for 2012 and 2013 (March).

| Date     | Participant , Place                                      | Short Description   | Longer Description (from ATLAS VV site)   |
|----------|--|---|---|
| 28/03/12 | University of Birmingham, UK                             | Visit of Masterclass students with ATLAS Birmingham colleague                       | <a href="http://atlas-live-virtual-visit.web.cern.ch/atlas-live-virtual-visit/2012/Birmingham-2012.html">http://atlas-live-virtual-visit.web.cern.ch/atlas-live-virtual-visit/2012/Birmingham-2012.html</a> |
| 04/04/12 | High Schools of Pelopio and Lalas villages, Greece       | Visit during Masterclass by IASA, EA  | <a href="http://atlas-live-virtual-visit.web.cern.ch/atlas-live-virtual-visit/2012/Lalas-2012.html">http://atlas-live-virtual-visit.web.cern.ch/atlas-live-virtual-visit/2012/Lalas-2012.html</a>           |
| 05/07/12 | Discover the COSMOS Summer School, Panormo Crete, Greece | Forty students from all over Greece participating in Masterclass                    | <a href="http://atlas-live-virtual-visit.web.cern.ch/atlas-live-virtual-visit/2012/Crete-2012.html">http://atlas-live-virtual-visit.web.cern.ch/atlas-live-virtual-visit/2012/Crete-2012.html</a>           |
| 15/11/12 | Athens College, Greece                                   | Visit during Masterclass by IASA, EA  | <a href="http://atlas-live-virtual-visit.web.cern.ch/atlas-live-virtual-visit/2012/Athens-2012.html">http://atlas-live-virtual-visit.web.cern.ch/atlas-live-virtual-visit/2012/Athens-2012.html</a>         |
| 23/11/12 | Netzwerk Teilchenwelt, Dresden, Germany                  | Visit by the Technical University of Dresden during "Netzwerk Teilchenwelt" program | <a href="http://atlas-live-virtual-visit.web.cern.ch/atlas-live-virtual-visit/2012/Dresden-2012.html">http://atlas-live-virtual-visit.web.cern.ch/atlas-live-virtual-visit/2012/Dresden-2012.html</a>       |



|       |  |  |   |
|-------|--|--|---|
| 05/12 | Protipo Athinon High School, Athens, Greece  | Visit during the "CERN scientific member for an hour" event                                  | <a href="http://atlas-live-virtual-visit.web.cern.ch/atlas-live-virtual-visit/2012/Athens_Protipo-2012.html">http://atlas-live-virtual-visit.web.cern.ch/atlas-live-virtual-visit/2012/Athens_Protipo-2012.html</a>   |
| 15/12 | <a href="#">The Annual 'Woudschooten' Conference in Noordwijkerhout, Netherlands</a> | Visit during workshop "Bringing CERN to the School Classroom"                                | <a href="http://atlas-live-virtual-visit.web.cern.ch/atlas-live-virtual-visit/2012/Noordwijkerhout-2012.html">http://atlas-live-virtual-visit.web.cern.ch/atlas-live-virtual-visit/2012/Noordwijkerhout-2012.html</a> |
| 17/12 | High School of Moschato, Athens, Greece  | Visit during Masterclass by IASA, EA   | <a href="http://atlas-live-virtual-visit.web.cern.ch/atlas-live-virtual-visit/2012/Athens_Moschato-2012.html">http://atlas-live-virtual-visit.web.cern.ch/atlas-live-virtual-visit/2012/Athens_Moschato-2012.html</a> |
| 24/01 | Argos, Greece  | Visit by students from all three high schools of Argos combined with Masterclass by IASA, EA | <a href="http://atlas-live-virtual-visit.web.cern.ch/atlas-live-virtual-visit/2013/Argos-2013.html">http://atlas-live-virtual-visit.web.cern.ch/atlas-live-virtual-visit/2013/Argos-2013.html</a>                     |
| 26/02 | Yannopoulos High School, Glyfada, Athens, Greece                                     | Visit combined with Masterclass by IASA, EA  | <a href="http://atlas-live-virtual-visit.web.cern.ch/atlas-live-virtual-visit/2013/Glyfada-2013.html">http://atlas-live-virtual-visit.web.cern.ch/atlas-live-virtual-visit/2013/Glyfada-2013.html</a>                 |
| 01/03 | 1 <sup>st</sup> Senior High School, Pyrgos, Greece                                   | Visit combined with Masterclass by IASA, EA  | <a href="http://atlas-live-virtual-visit.web.cern.ch/atlas-live-virtual-visit/2013/Pyrgos-2013.html">http://atlas-live-virtual-visit.web.cern.ch/atlas-live-virtual-visit/2013/Pyrgos-2013.html</a>                   |
| 05/03 | 3 <sup>rd</sup> Lyceum of  | Visit combined   | <a href="http://atlas-live-virtual-visit.web.cern.ch/atlas-live-virtual-visit/2013/Pyrgos-2013.html">http://atlas-live-virtual-visit.web.cern.ch/atlas-live-virtual-visit/2013/Pyrgos-2013.html</a>                   |

|  |          |                              |  |
|--|----------|------------------------------|--|
|  | Komotini | with Masterclass by IASA, EA | <a href="http://visit.web.cern.ch/atlas-live-virtual-visit/2013/Komotini-2013.html">visit.web.cern.ch/atlas-live-virtual-visit/2013/Komotini-2013.html</a> |
|--|----------|------------------------------|--|

## Activities in Portugal

### Discover the COSMOS Workshops

Training workshops are being held all over the country introducing teachers to modern tools and resources. Teachers are discussing the use of innovative tools and IBSE in Portuguese classroom. The training events are taking place at a national level: Lisbon, Porto, Algarve, Aveiro and Coimbra. Over 100 teachers are participating in the workshops.

### Dark Skies Rangers

Discover the COSMOS is bringing the fight against light pollution to schools across Portugal. With the support of Portuguese EcoSchools over 1500 schools are being invited to evaluate the impact of light pollution in their region and deliver a formal audit to local authorities. Teachers are being invited to promote the integration of this resource in the curriculum promoting the scientific method to create awareness in the students

### Global Astronomy Month (GAM)

Discover the COSMOS is partnering with [Astronomers without borders](#) to promote an international campaign in the scope of GAM, an event celebrated every year in April. Target objects are selected for the different weeks of the month. The plan is as follows:

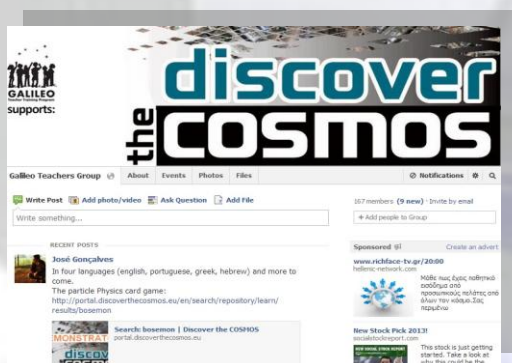
April 1<sup>st</sup> to April 6<sup>th</sup> à Jupiter Week  
 April 7<sup>th</sup> – Sun  
 April 8<sup>th</sup> to April 14<sup>th</sup> à Orion Week  
 April 15<sup>th</sup> to April 21<sup>st</sup> à Moon Week  
 22<sup>nd</sup> to 28<sup>th</sup> à Saturn and comets week  
 20<sup>th</sup> – Dark Skies Rangers Day  
 25<sup>th</sup> – Partial Lunar Eclipse

During the whole event the National Schools Observatory will observe the targeted object and the images will be made available in the DtC social network. The Astronomical Observatory of Coimbra will associate to this initiative and images from the Sun will also be made available daily. Teachers will be invited to produce learning activities, using the inquiry methodology, and recurring to the spotted images.

### ***Join us in Discover the COSMOS Resource of the Week!***

Since the beginning of March, a resource of the week is being announced in the [Discover the COSMOS / GTTP](#) social network. Teachers are being advised to visit Discover the COSMOS resources and share their ideas with us.

**Join the effort!**



### ***Greek press speaks about CERN and the exhibition in Greece***

**Article:** CERN Experiment: Has the journey ended?

Video conference with students from around the world with scientists from the ATLAS and CMS experiments

The article is available in Greek, [here](#).

## **Agenda**

### ***Some of the upcoming events***

1. **Weltmaschine – Parlamentarischer Abend:** German particle physicists (from ATLAS and CMS experiments and the organizations KET and the German Physical Society) and high school students are inviting parliamentarians of the Bundestag ( Berlin, 14/03/2013)
2. **Astronomia em Crescente (Astronomy in Crescent Moon)-** (Portugal, 23/03/2013, 20/04/2013, 18/05/2013, 15/06/2013)
3. **Symposium EEE: Materials Education— Toward a Lab-to-Classroom Initiative** (<http://www.mrs.org/s13-cfp-eee/>): Invited talk on how Discover the COSMOS changes the high school teaching (San Fransisco, USA, 02/04/2013)
4. **Sofia Science Festival:** In the event there will be an exhibition space for visitors to learn more about the project. 4 Discover the COSMOS workshops (as implementation activities) will also occur (Sofia, Bulgaria, 09-12/05/2013)
5. **International conference The Future of Education:** Discover the COSMOS will be presented in the conference (Florence, Italy, 13-14/06/2013)
6. **Physics Experience day:** Researchers and PG students demonstrating to students and teachers PP experiments with emphasis on data taking and analysis (Birmingham, UK, 01/07/2013)
7. **EWASS 2013,** European Week of Astronomy and Space Science: Presentation of Discover the COSMOS during the special session: Astronomy education and public outreach (Turkey, Finland, 08-12/07/2013)



8. **ICNFP 2013**, International Conference on New Frontiers in Physics 2013 (Crete, Greece, 28/08-05/09/2013)
9. **International Discover the COSMOS Conference**: will be organized under the collaboration of the International Olympiad on Astronomy & Astrophysics (IOAA) in Volos (Volos, 02-04/08/2013)
10. **EPSC – Europlanet Science Congress 2012**: Presentation of Discover the COSMOS during the special session: Outreach, education and policy  
<http://www.epsc2013.eu/>  
(London, 26-27/09/2013)



## Further Information

### Follow us on Web

- ➡ [Portal.discoverthecosmos.eu](http://Portal.discoverthecosmos.eu)
- ➡ [www.discoverthecosmos.eu](http://www.discoverthecosmos.eu)
- ➡ [www.facebook.com/Discover the COSMOS](https://www.facebook.com/Discover the COSMOS)



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