Conclusions Kenya October 2013

Several participants explain the status of Astronomy in primary and secondary schools:

- There are no Astronomy courses in either primary or secondary schools. Usually some astronomical topics are taught through physical geography in primary schools, at age between 12 and 14. They learn about our Earth, planets, and Solar System in general (only basic things), and phenomena like tides, Moon phases, and eclipses.
- Astronomy can also be mentioned in science of secondary schools, again mainly talking about Solar System (number and order of planets, mentioning small bodies like asteroids and comets). Sometimes teachers mention that our Solar System is inside the Milky Way, but without entering into details.
- In general, teaching Astronomy is mainly based on theory. Teachers do not apply any practical exercises to show different astronomical/physical phenomena to their pupils.
- NASE participants expressed their believe that primary/secondary school teachers in Kenya need help with teaching. They said that very often teachers do not have possibilities to understand all topics that they are supposed to teach. One of participants (recent graduate student in Astrophysics at the University of Nairobi), originally coming from the south-west region of Kenya, around Victoria Lake, expressed his passion for teaching, and talked us about the contacts that he established with teachers from his home town. They call him when he goes back home to help them with teaching Astronomy, where very often pupils and teachers express their interest and curiosity for Astronomy and ask him many questions. He also expressed his interest to apply NASE activities into these classes.

After the first part about the situation of education in Kenya there are some participants that talk about their opinion as participating

- Good done course so brilliant and that show passion for teaching. Please we need more next year
- The NASE basic course is very much interesting and presents a practical part of astronomy and participants can make by themselves. I am interested in teaching astronomy and space science and NASE methodology can be used in order to explain astronomy in primary or secondary school and also in university. To continue we need to use NASE materials, the CD and the website of NASE. I request more materials. Please send us more materials, some of them for schools, astronomy clubs and just graduated university students. Astronomy clubs are very active and they pass information to a lot of motivated people that can do a very well done work.
- Astronomy Clubs in Nairobi University will pass and extend NASE materials to other students who cannot participate in the NASE course: people who study geography, space science and other science areas which are interested in astronomy. Materials are good. I plan to come back to my primary and secondary

school to help teachers to introduce astronomy and make NASE experiments. Please email to me. I would like to continue in touch.

- Astronomy is an introductory course in this university of Nairobi and in general in Kenya universities activities are not practical. Please, could NASE ask to the staff department of physics if some of them can organize materials in their classes in a more practical way?
- In Kenya schools students take notes and listen. At the university professors and teachers only present lectures, no diagrams and no experiments. It is difficult to get concepts with this methodology. In my studies, I thought that I had a problem to understand concepts, I believe now that the problem is the methodology used. This course refreshed me and with this practical approach I can see the explanation with experiments. The NASE materials are excellent. This methodology is a very good idea; our professors should use it and change their kind of presentations. People are not stupid; the method to present concepts is very important! Continue with this course and help us in Africa