

# Inquiry in the West African Summer School for Young Astronomers (Abuja, Nigeria)

*Week-long course in astronomy for 70 undergraduate science majors and teachers in Nigeria (October 2013)*



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[www.tinyurl.com/westafrica-astro](http://www.tinyurl.com/westafrica-astro) (IAU Commission for Astronomy Education & Development Newsletter 80, October 2014, p.11)

## Introduction to Nigeria

- Population = 200 million
- Mean 5 years of schooling
- Low UN Human Development Index
- Single university astronomy program
- Capital city = Abuja

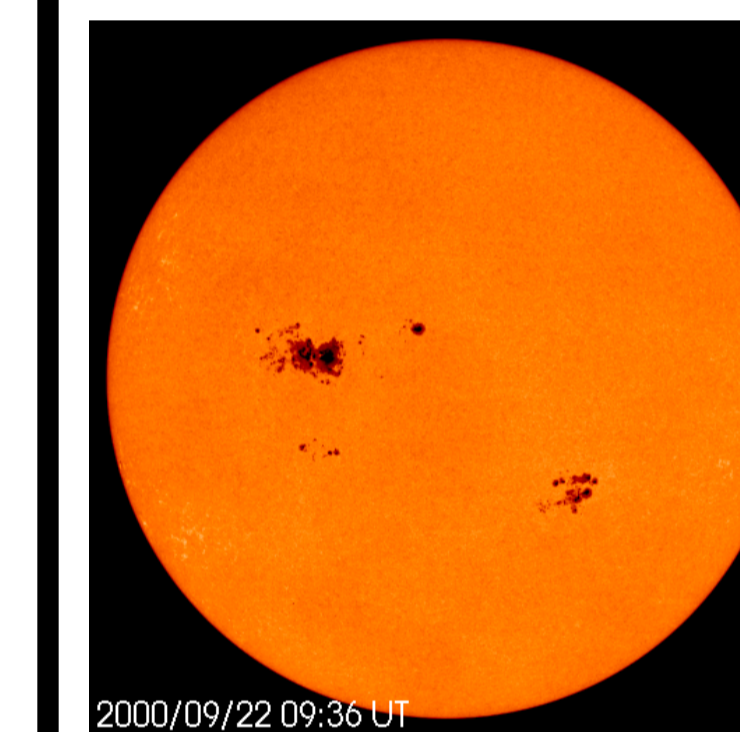


## Overall Goals for the School

- Introduce West African students to astronomy
- Exchange ideas about teaching and learning in West Africa and North America
- Build foundation for sustained astronomy partnership between West Africa and Canada

## Sample Inquiry Path

**Investigation Question: "What are sunspots?"**



"What observations would you want to start answering this question?"

→ "How big are sunspots?"

→ "How do you know the size of the Sun?" -- "We were taught it."

**Groups worked to discover the method of parallax**

## Inquiry activity: Distances in the Universe

Goals: Students will learn:

- Parallax method for measuring nearby distances
- Inverse-square law for light + standard candles for measuring large distances
- Engaging in argument from evidence



Alumni community on Facebook  
Group reactions to African eclipse  
(November 2013)



**Onyekaonwu Chisom Val**

Pple was really doubting the eclipse saying that we scientist lie a lot, and we engaged in a serious argument. at 1pm no sign of the moon, i wanted to cry; around 1:30 the sun was still hot. 2pm it was same. They started laughing at me saying dat we dnt know wat we re doin; and i made a vow with them dat if it did nt happen dat i will quit astronomy. Around 2:30 ma face was full of laughter wen i saw it! "Yu guys need to cee the joy dat filled ma heart" thanks to my solar glasses, they all saw it and closed their mouth, and i felt like am on top of the world (the boss) now i wanna say thanks to all my fellow astronomers (astronomy without boundaries) all over the world to ma colleagues at narsda lecturers from toronto (yu guys rock). Big shout to B OKERE (gently man without llimit)!!!! Still curious i want to know more and to all science lover out there we will find you, keep it alive!!!!!! Astronomy will remain ma life ambition let's Go there

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## Evaluation & Reflections

Pre- & Post- surveys:

- *Astronomy Concept Inventory questions:*

Students showed significant improvement on some questions

- *Career as a Scientist:*

Interest and confidence began and remained very high

*"This process has actually made me realize that I can think and find answers to questions on my own without external help. I can now say I can think like a scientist."*

**Future: Awarded International Astronomical Union grant to teach school again in July 2015**



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