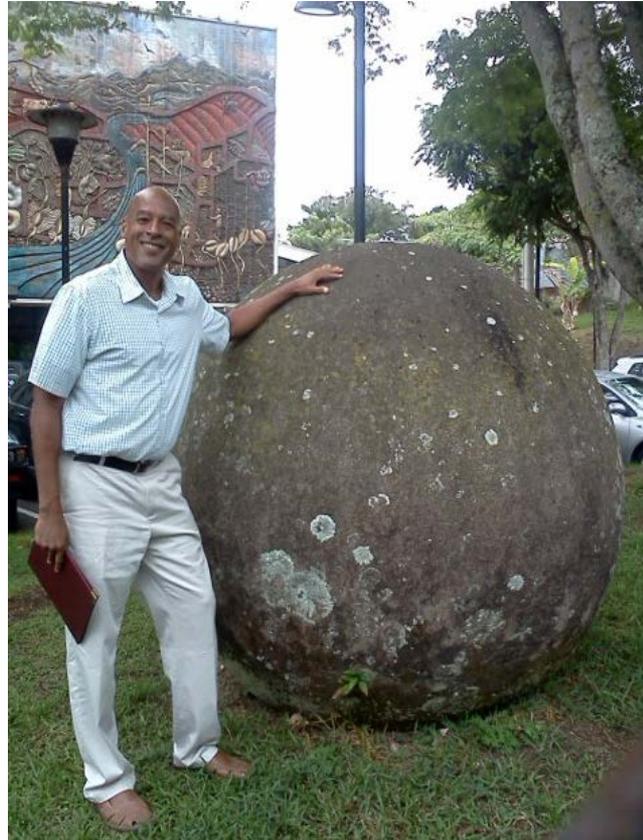


# Proposal to Create an Office for Outreach Activities on the UN-OOSA Platform

June 15, 2016



by  
LeRoy Larry

# UN/Costa Rica Workshop on Human Space Technology

- An ongoing theme was the need to connect-up with people concerning HSTI.
- Three target groups identified were the general public including students, stakeholders, and decision makers.
- Students were specifically discussed as being strongly motivated by human space exploration to enter science and technology careers, which could encourage them to pursue highly specialized skills.
- The human element of space exploration uniquely captivates the imagination and fosters national self-confidence.
- Organization and coordination are needed for HSTI outreach activities to be successful.

Proposal:

To create a desk office to organize and coordinate HSTI outreach activities on the UN-OOSA platform.

# HSTI Outreach Activities

- The office will organize and coordinate the programs in collaboration with Agencies in developing and developed countries.
- The office will address the outreach-related observations and recommendations of the HSTI Working Groups.
- The activities will be derived from the space-related areas in which UN-OOSA is actively involved as contained in the Program on Space Applications.
- The activities will include, but not be limited to, customized space education outreach programs modeled on the ARCSSTE-E Workshop in Astronomy for Teachers template.
- Representatives from the identified target groups of general public, stakeholders, and decision makers, will be invited to participate in the workshops.
- The level of the material presented will be commensurate with that of the participants, and will be presented in such a way as to be educational and motivational.

# Template for Outreach Activities

- Slide selection and sequencing to visually tell a story.
- Brief audio descriptions added for each slide.
- Documentation of brief descriptions.
- Relevant more in-depth information added to the documentation.
- PowerPoint presentation and Movie Maker video produced.
- Lecture using PowerPoint presentation.
- Educational media consisting of presentation, documentation, and video.

The template can be adapted to any target group, age range, subject matter, level, country, culture, and language, around the globe!

# Methodology

Entertain - Educate - Entice

Entertain: the “hook”, entertainment - the video

Educate: the presentations, the brief descriptions

Entice: motivation to learn more - the in-depth documentation

# YOUNG BLACK SCHOLARS

An educational activity of the 100 Black Men of Los Angeles, Inc.

Class of 1994 "Math--The Universal Language Workshop"

University of California, Los Angeles\* Rolfe Hall

Saturday\* November 23, 1991 \*9:00 a.m. -12 noon

## AGENDA

Registration/Refreshments YBS Staff and Co-sponsors

Welcome/Greetings

YBS Alumni Scholars-Class of 1990  
100 Black Men of Los Angeles, Inc.  
UCLA "University Express" Presentation

"Mathematics: Cultural Connection to our Past, Present, and Future"

Keynote Speaker: **Leroy D. Larry, Jr.**

Jet Propulsion Laboratory Special Projects  
California Institute of Technology

Workshop Sessions

(Rolfe 2134, 2125, 2203, 3115, and 3235)

a. "Meeting the Academic Challenges"

M.B.A. Student Panel - UCLA Anderson School of Management  
**Rod Dick, Phillip Gray,**  
**Evan Hainey, and Karen Walker**

b. "Brain-teasers: Practical Problem-Solving Applications"

**Lloyd Ferguson, Jr., Ph. D.**  
Professor, California State Polytechnic  
University, Pomona

c. "Career Connections in Engineering"

**John Heath**  
Los Angeles Council of Black Engineers

d. "Career Connections in Business"

**Rick Hodge, Outreach Counselor**  
CSU Northridge

e. "Math Resources and Study Skills"

**Wilfred Smith**  
LAUSD "Homework Hotline"

Evaluation/Adjournment

Vertical lines, equally spaced, are used in the sketch in a manner reminiscent of our common graph paper. The height of the vertical lines gives the desired height at the horizontal location indicated by the

$$\text{distance} = \frac{4.58 \times 10 \text{ km}}{2.00 \times 15 \text{ km/s}} = 15.3 \text{ km}$$

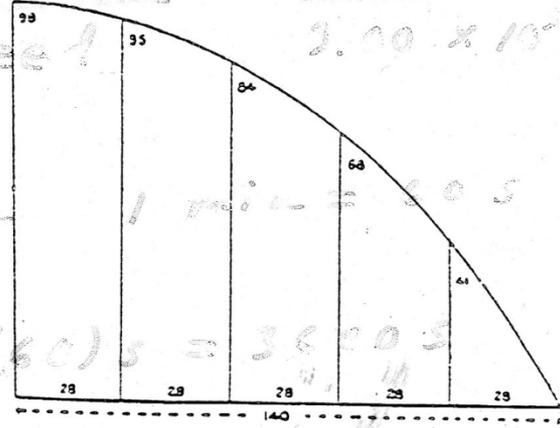
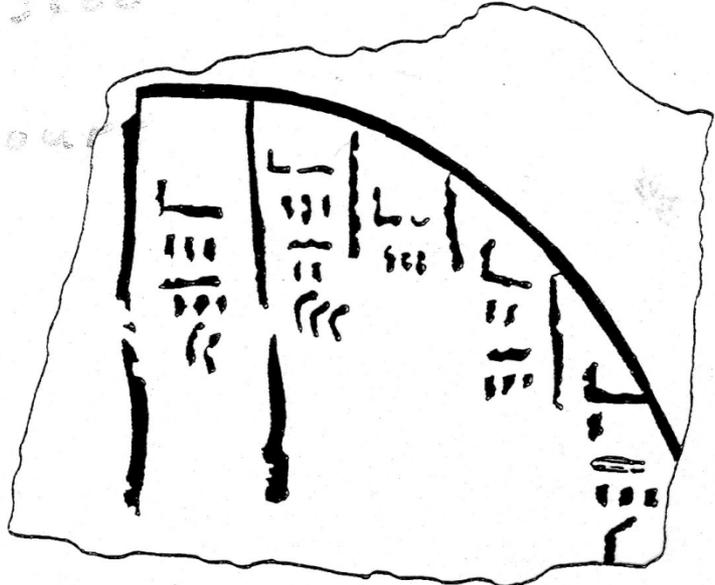
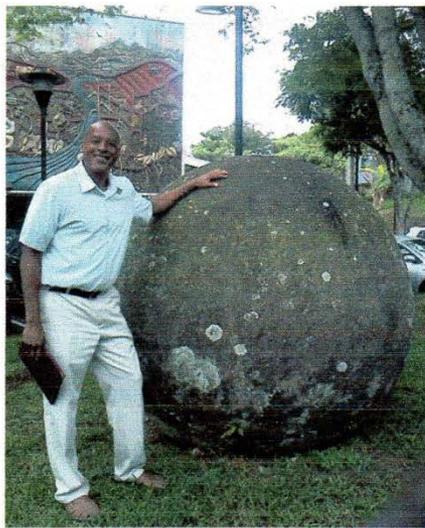


Fig. 4A. Scale-drawing of the curve whose particulars are indicated on the ancient diagram shown in Fig. 4B. Lumpkin — Fig. 4A.





## **Natural Physics!**

Caveman Physics!

What Made the Hulk the Hulk?!

Ancient Physics Keys to Modern Astrophysics Locks!

Date: November 5, 2015

Time: 5 pm to 6 pm

Location: UCR Planetarium

**presented by M.Sc. LeRoy Larry**

*UCR CINESPA Astrophysics Doctoral Candidate*

*UCR Department of Physics Professor*

*NASA Galileo Jupiter Space Probe Mission Project*

*NASA Space Shuttle Plasma Physics*

*Fermilab High-Energy Particle Accelerator Physics*

# Noche de las ESTRELLAS<sup>®</sup>

28 de noviembre de 2015

Préndete con la luz del Universo

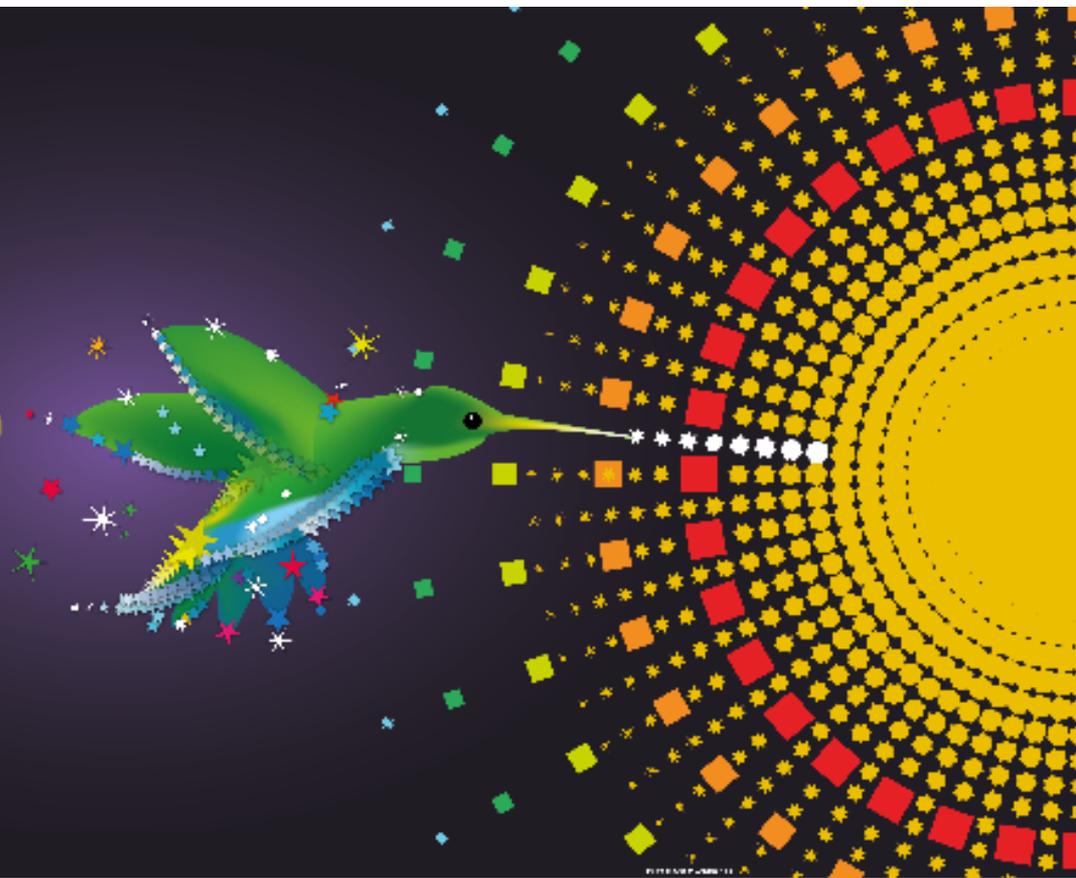
**PLANETARIO DE SAN JOSÉ**

3:00 pm a 10:00 pm - **Entrada Libre**

Telescopiada - Conferencias  
Presentaciones - Talleres



[/nochedelasestrellas](#) • [@nochedelasestrellas](#) • [nochedelasestrellas.org.ni](http://nochedelasestrellas.org.ni)



**Programa**  
**NOCHE DE ESTRELLAS**  
**Dedicado al Año Internacional de la Luz**  
**Planetario de San José, Universidad de Costa Rica**  
**28 de Noviembre:**

**15pm-17:30pm:**

*Nuevas Misiones del Sistema Solar* -Mag. Leonardo Herrera (15pm-15:40pm)  
*Nueva luz sobre Plutón* -Dr. Daniel Azofeifa (15:40pm-16:20pm)  
*Light from the Galactic Plane* -MSc. LeRoy Larry (16:20pm-17pm)  
*La luz de remanentes de supernovas*-Dr. Miguel Araya (17pm-17:40pm)

**17pm-18pm: (2 talleres para 15 personas)**

*Taller de Telescopios-Tec. Eric Sanches*

**18pm-22pm:**

*Telescopiada en acera*

**18pm y 20pm:**

*Programa Fulldome en el Planetario\**

*\*Las actividades son gratuitas, solo el programa fulldome tiene un costo especial de c2000 y requiere la reservación.*

# ARCSSTE-E Workshop in Astronomy for Teachers

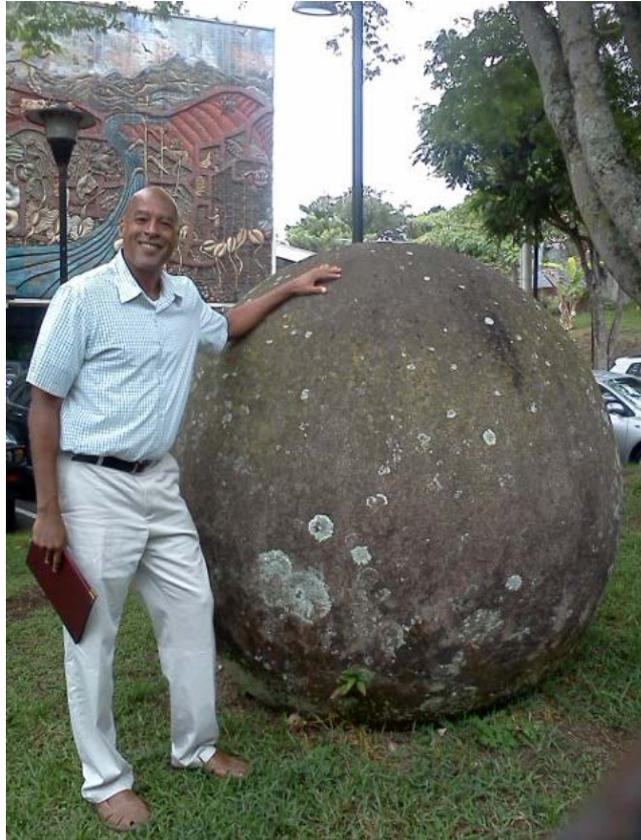
- The National Workshop on Astronomy for Teachers is designed to promote the teaching of Sciences, Technology, Engineering and Mathematics (STEM) by introducing Astronomy, in a simplified and readily comprehensible format, to primary and secondary school teachers in Nigeria.
- Using the ARCSSTE-E Workshop in Astronomy for Teachers as a template will provide additional access to the target groups at an even more basic level.
- The knowledge and enthusiasm about astronomy acquired by the teachers from the Workshop is in turn transmitted to their students.
- The students are the children of the general public, stakeholders, and decision makers.
- To observe such knowledge and enthusiasm in their children will capture the interest of the parents and inspire them to get further involved.

# Template Adaptation to ARCSSTE-E Workshop

- Slide selection and sequencing to visually answer the question posed.
- Brief audio descriptions added for each slide.
- Documentation of brief descriptions.
- STEM and topics from the Nigerian curriculum added to the documentation.
- PowerPoint presentation and Movie Maker video produced.
- Lecture using PowerPoint presentation.
- Computer interactive exercises involving SLOOH and Stellarium.
- Quiz to evaluate teachers' knowledge of material learned.
- Resource materials consisting of presentation, documentation, and video.

# Where is Outer Space?

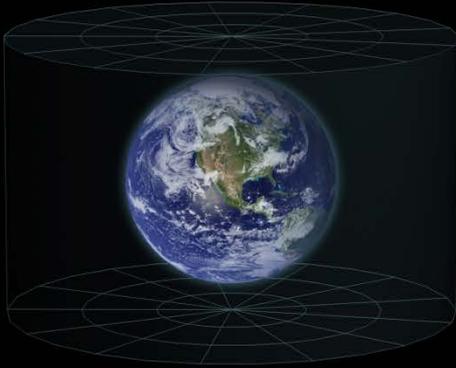
June 22, 2016



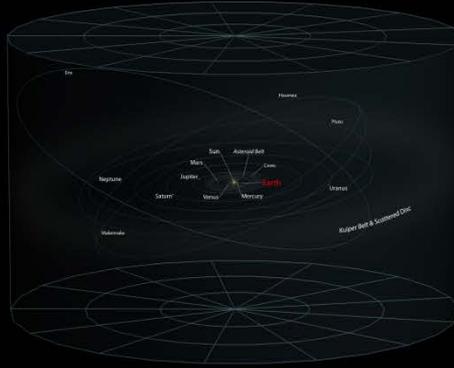
by  
LeRoy Larry

Velocity of light = 186,000 miles/sec = 298,000 km/sec

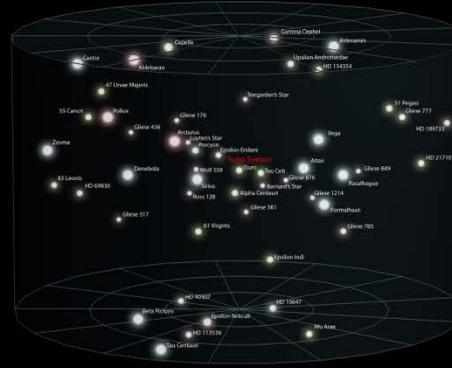
EARTH



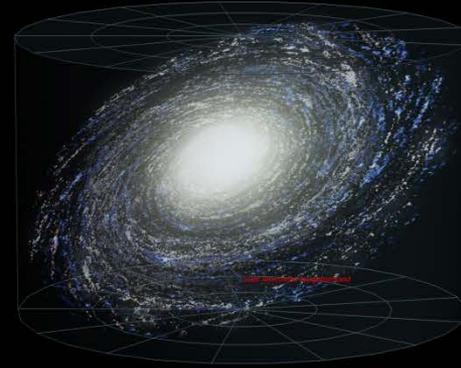
SOLAR SYSTEM



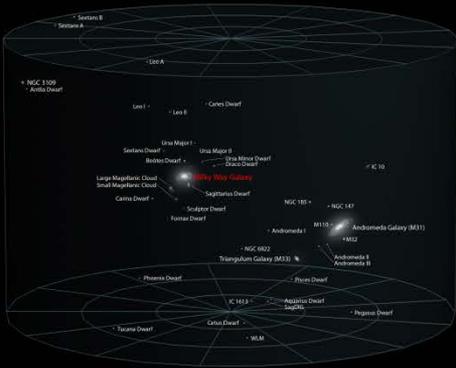
INTERSTELLAR NEIGHBORHOOD



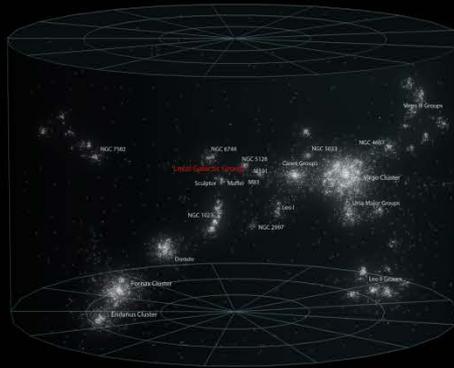
MILKY WAY GALAXY



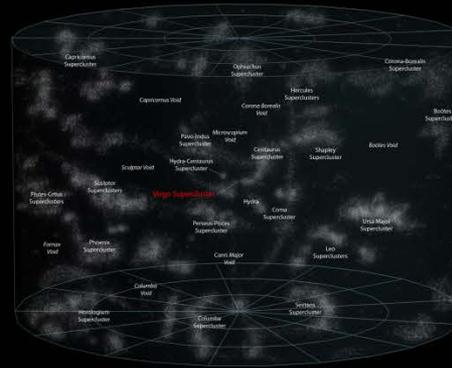
LOCAL GALACTIC GROUP



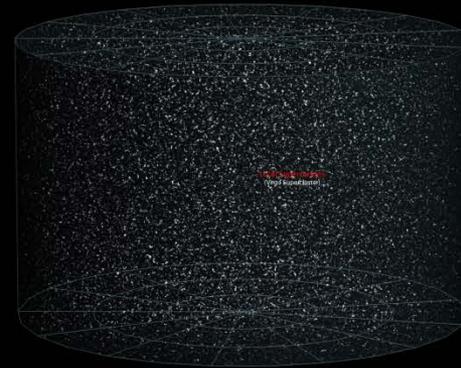
VIRGO SUPERCLUSTER



LOCAL SUPERCLUSTERS



OBSERVABLE UNIVERSE



1 light-year (ly) = 6 trillion miles = 10 trillion km

# Obstacles Encountered and Surmounted

Funding is the major obstacle and constraint because the agencies organizing the Workshop are funded by the Federal Government of Nigeria:

- The Centre for Space Research and Applications (CESRA), Federal University of Technology, Akure (FUTA)
- The African Regional Centre for Space Science and Technology Education in English (ARCSSTE-E), Obafemi Awolowo University campus, Ile-Ife
- The Organization of Women in Science for the Developing World (OWSD), FUTA Chapter.
- Slooh Community Observatory, USA

## Proposed Office Implementation

- Organize collaboration between the individual organizers on funding needs.
- Coordinate collaboration between the organizers and the Federal Government on funding needs at an early stage.

# Conclusions

- The successful results of the ARCSSTE-E Workshop in Astronomy for Teachers emphasize the need to organize and coordinate HSTI outreach activities.
- The obstacles encountered in organizing and coordinating the ARCSSTE-E Workshop in Astronomy for Teachers emphasize why it is necessary to conduct these activities from the UN-OOSA platform.