

# Astronomy, Space, & Politics

Keith Gottschalk  
Astronomy History  
Symposium  
SAAO, 2018

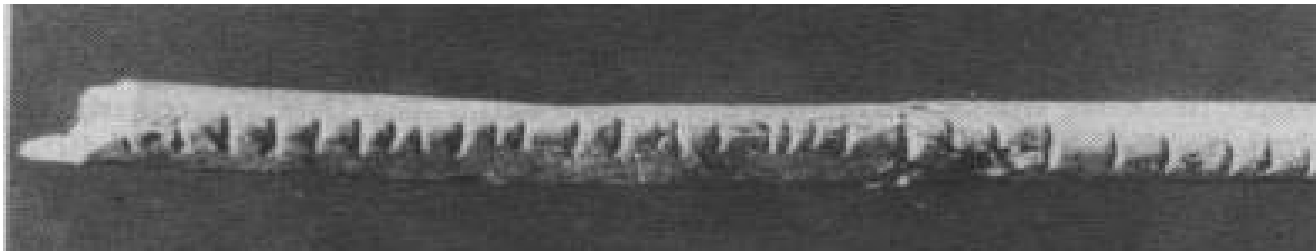


# Astronomy in Africa

## - Historic snapshots

- evolution from
- Astronomy for a thinker
- Astronomy for a community
- Astronomy for a polity

Lebombo bone 35 000 BCE  
Ishango bone 20 000 BCE



**2 views of the Ishango Bone**

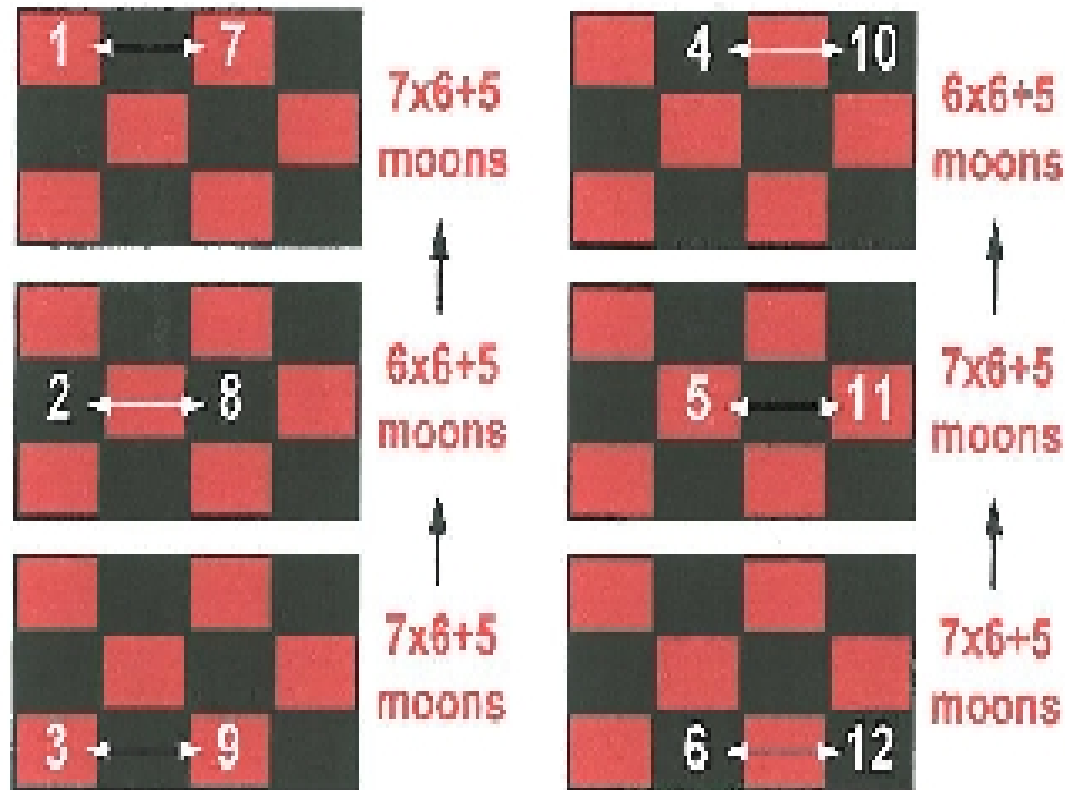


Photo courtesy of Science Museum of Brussels.

# Rock paintings San / Bushmen



# Acano : Amazigh (Berber) lunar calendar, Canary Isles



A count of **270 moons** (46 could give eclipses)

# Nabta Playa solar observatory

Upper Egypt, c. 4500 BCE



# Namoratunga

- Namoratunga, a megalithic site in northwestern Kenya, has an alignment of 19 basalt pillars that are nonrandomly oriented toward certain stars and constellations. The same stars and constellations are used by modern eastern Cushitic peoples to calculate an accurate calendar. The fact that Namoratunga dates to about 300 B.C. suggests that a prehistoric calendar based on detailed astronomical knowledge was in use in eastern Africa.

# Namoratunga c. 300 BCE





# Axum Kingdom coin, pre-333 CE



# Astronomy, politics, & business

- AW Roberts, senator 1920s
- Rupert Hurly, councillor, MPC, Progressive Party 1960s-1970s
- Clem Sumter , AAC
- 1991-94: ANC Science & Technology Policy Group
- Post-1994: Parliamentary portfolio committee on S&T

# Democracy 1994 -

- Education, Arts & Science  
Department – Arts & Science  
split off
- Then Arts split off Department of  
Science & Technology
- Record of quarter-century:
- 2 highs & 1 low

# 2 HIGHS & 1 LOW

- 1996 White Paper
- 2000 groundbreaking ceremony for SALT
- 2007 Astronomy Geographic Advantage Act
- 2010s-2020s KAT, MeerKAT, & SKA phase 1
- What are the political drivers of astronomy winning unprecedented state support?

- White Paper on Science & Technology, 1996

“It is also important to maintain a basic competence in flagship sciences such as physics and astronomy for ***cultural*** reasons. Not to offer them would be to take a negative view of our future – the view that we are a second class nation chained forever to the treadmill of feeding and clothing ourselves.”

- pg.16 (emphasis added)

# Political drivers of Astronomy

- Political prestige, more specifically
- Resentment of denigration & derogatory stereotypes of Africa & Africans
- Pride in projecting Africa, & Africans, as leaders in world-class, cutting-edge S&T
- (PR: universally, politicians like posing next to new, big, shiny, machines)
- Budget allocations justified as catalyst for Human Capital Development
- Bob Stobie drafts SALT Collateral Benefits Programme

# 1<sup>st</sup> public star party @ Sutherland

- *Nuwejaar*
- 1 Jan 2009



Democracy = Winning support from  
voters & taxpayers

- SAAO 1<sup>st</sup> fulltime posts for public education
- 2011: Win IAU OAD
- Multilingual educational material
- Future steps: eg. Shuttleworth education trailer visited 100 schools in all 9 provinces
- DST, NRF, SAASTA



# 1 LOW

- 2009-10: Phil Charles affair
- Autocratic bureaucrat sought to insult & humiliate SAAO Director
- RECOMMENDATIONS:
- 1) SAAO, SRAO, IDIA, ASSA should seek to cultivate close relations with Parliamentary S&T portfolio committee; also minister, deputy minister, DG & DDG.

# Way forward:

## Policy Recommendations

- 2) Supplement Astronomy Geographic Advantage Act with a national dark sky law, as Czech & Slovenia Republics already have
- Key lobbying point: full cut-off light fixtures mean we can use smaller wattage, save electricity & save money
- 3) Astronomy, other space sciences, astronautics must be clustered together for public outreach



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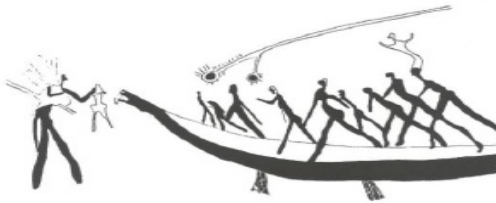


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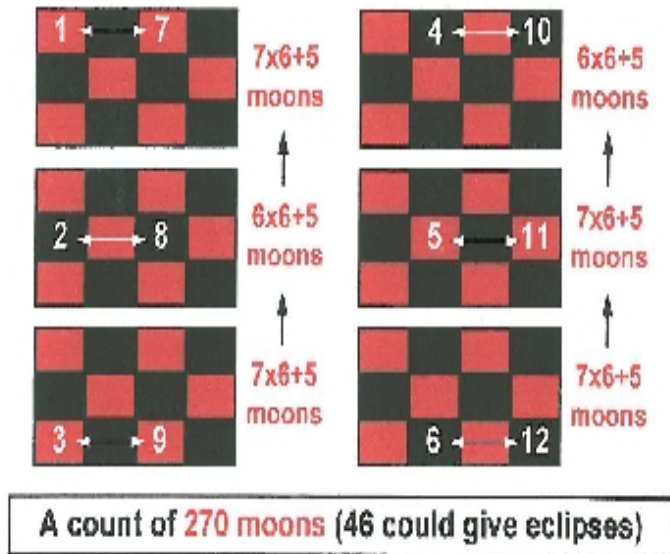


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