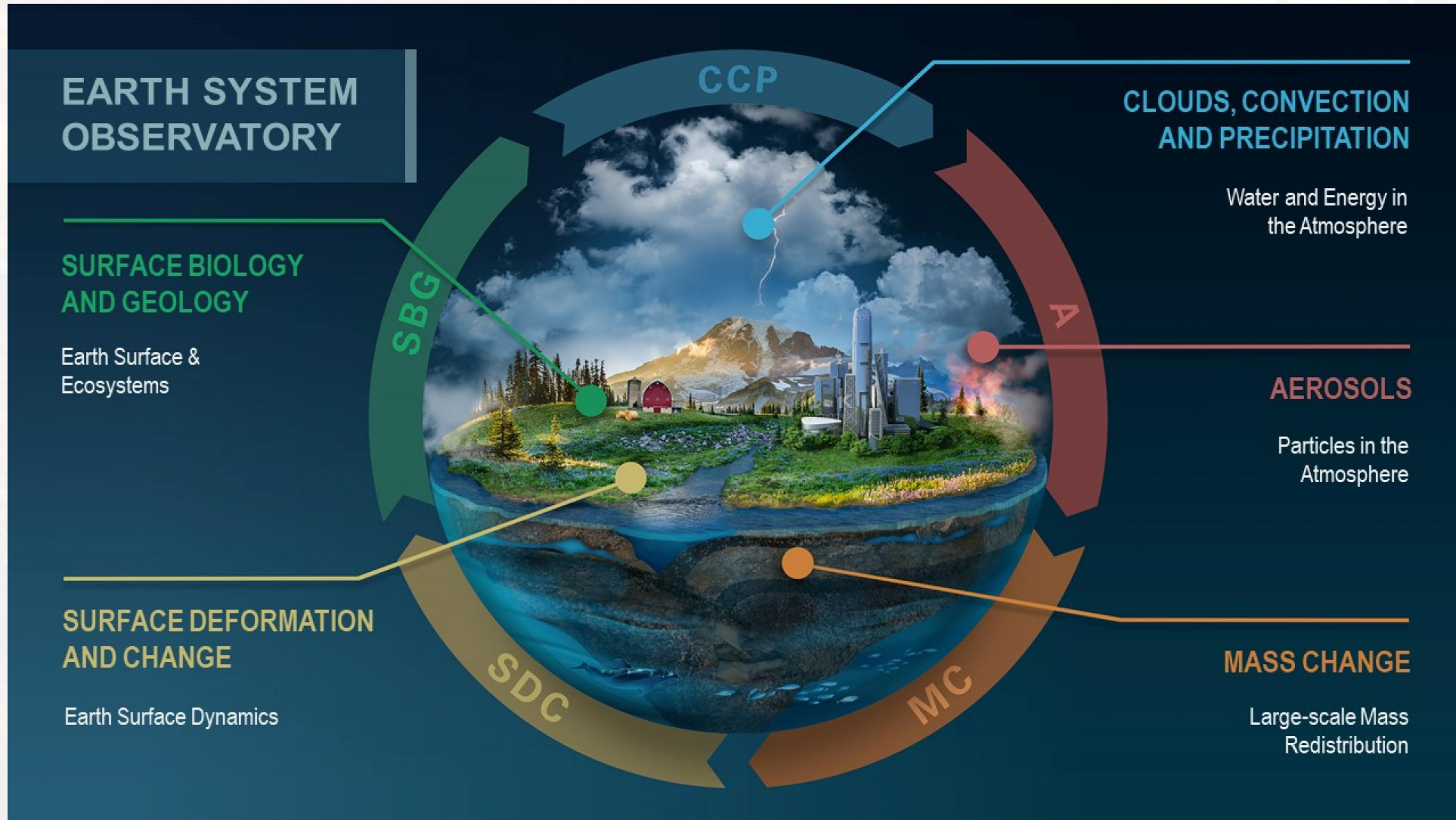


AFRICAN STRATEGY FOR FUNDAMENTAL AND APPLIED PHYSICS (ASFAP)

Earth Science Working Group

What are the Earth Sciences?

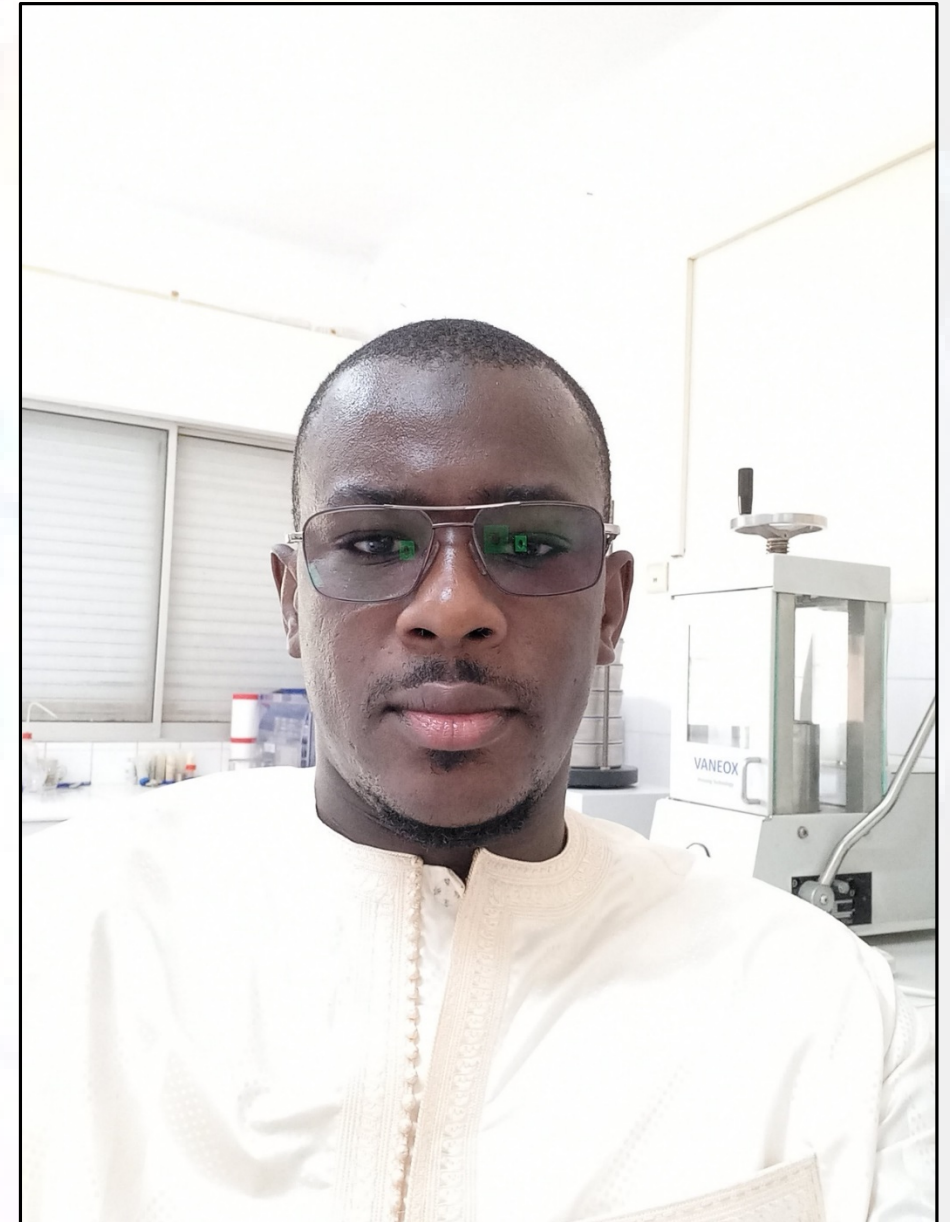


What are the Earth Sciences?

- ‘Multi-spheric’ – comprising lithosphere, hydrosphere, biosphere, cryosphere, troposphere, stratosphere, and all the way out to the exosphere.
- Broad umbrella term: necessarily an inter-disciplinary field of study.
- A systems science, strongly underpinned by physics and physical principles.
- Sub-disciplines, heavily reliant on physics, include:
 - hydrogeology, geophysics, geophysical fluid dynamics, atmospheric physics and aeronomy, ocean physics, space physics and astronomy, environmental physics, meteorology, climatology, tectonics, seismology, gravity and magnetism, mineralogy and petrology, geochronology, ecotoxicology, among others...
- NB: Monitoring instrumentation and analytical techniques.

The Working Group

- **Dr Alassane Traore: Co-convenor**
- **Researcher and lecturer:** Institut de Technologie Nucléaire Appliquée, University of Cheikh Anta Diop (Senegal)
- **Research focus area:** New techniques and applications of nuclear spectrometry for in-situ characterization materials, in particular, the development of improved portable spectrometers and analytical procedures. Strong emphasis on portable instrumentation for characterising biogeochemical systems (e.g., soils, aerosols, etc.)



The Working Group

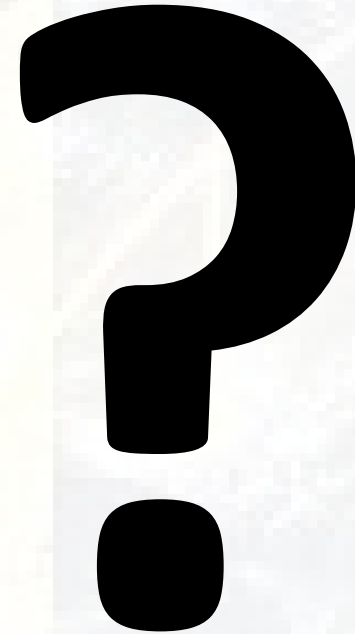
- **Dr Bjorn von der Heyden: Co-convener**
- **Researcher and lecturer:** Department of Earth Sciences, Stellenbosch University (South Africa)
- **Research focus area:** Hydrothermal ore deposits, high-level spectroscopies, geom Metallurgy, geology (Ph.D. background in Environmental Geochemistry)



The Working Group

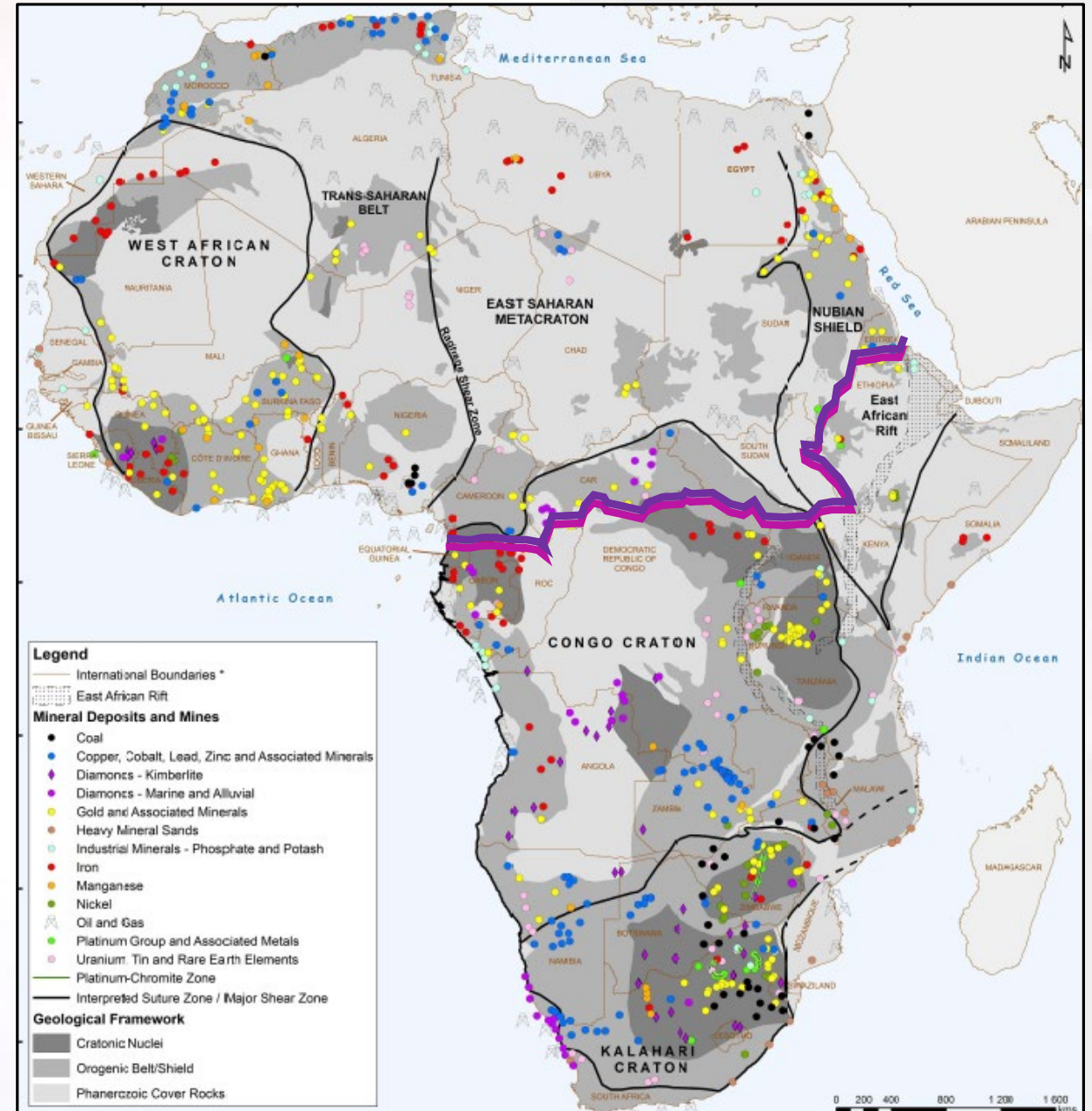
- Co-convener X
- Possible representative from Planetary Sciences?
- **The Earth Sciences Working Group is actively searching for a third co-convener to join the team. Should you wish to play a lead role in this working group, kindly contact:**

ASFAP-EarthScience@cern.ch



Our Approach

- Division of labour between northern and western Africa (Traore), and eastern and southern Africa (von der Heyden).
- Focus on distributing call for Lol to umbrella organisations, with request that they disseminate through their existing networks and mailing lists.
- Additionally, some key individuals will be targeted.



Our Approach

Preview of some organizations and individuals to whom we will reach out (work-in-progress):

Contact email will also include information about the African Light Source initiative (contributions towards a Conceptual Design Report)

Organisations

African Initiative for Planetary and Space Sciences

African Seismology Commission

African Geophysical Society

UCT Oceanography

Timeless Project

Geological Society of South Africa

Mineralogical Society of South Africa

Geological Society of Zimbabwe

Botswana Geoscience Institute

Geological Society of Namibia

Centre of Excellence for Integrated Mineral and Energy Resources Analysis (CIMERA)

Individuals

Dr Moussa Bounakhla	National Centre of Nuclear Energy Sciences	Morocco
Dr Samuel A. Bamford	Ghana Atomic Energy Commission	Ghana
Dr Christian Nuviadenu	Ghana Atomic Commission	Ghana
Dr Moncef Benmansour	Centre d'Etude Nucléaires de la Maâmora	Morocco
Holger Sommer	University of Namibia	Namibia
Gabriel Gwanmesia	Delaware State University	USA/Cameroon
David Baratoux	Université Félix Houphouët-Boigny	Abdijan, Côte d'Ivoire



Thank you!

**AFRICAN STRATEGY FOR FUNDAMENTAL AND APPLIED PHYSICS (ASFAP):
Earth Science Working Group**

Comments, concerns or suggestions can please be mailed to:

ASFAP-EarthScience@cern.ch