

# Inauguration of Arab Regional Office and Arabic Language Expertise Center – Meeting Notes

Amman, Jordan

Information - Read the [IAU Press Release](#),  
Website - <http://aw-road.auass.com/>

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**DECEMBER 02, 2015 09:30 am**

Meeting called to order and LIVE Broadcast on Skype begins  
National Anthem and Verses from the Holy Quran

## **Introduction by Dr. Awni Moh'd Al-khasawneh, Director General, Royal Jordanian Geographic Center (RJGC)**

### **Briefing by Dr. Hamid Al-Naimy, President of AUASS on UAE Astronomy**

- Description of activities in UAE: in 2015/16, declared astronomy and space sciences as a priority; established Emirates Space Agency and other institutions
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- Astronomy Center for research, observing galaxies and stars
- Second stage: 1 meter telescope, Radio telescope
- Goal is to encourage, develop young space scientists who can contribute to Emirates Space agency
- Future MoU with Emirates Space Agency

### **Introductions round the table:**

- Dmitri from Russia
- Mohammed from Libya
- Baba from Morocco
- Marwan, Jordan
- Suleiman, Palestine
- President of Jordanian Astro Soc
- Ali Taher, Sudan
- Muhammed, Syria
- Roger, Lebanon
- Monah, Kuwait
- Khalil, Jordan
- Ahmed, Egypt

- Jordan
  - UAE
  - Shawqi, Bahrain
  - Jamal, Algeria
  - Areg, Armenia (SWAROAD Director)
  - Haik, Armenia (BAO Director)
  - Piero, IAU GS
  - Kevin Govender, Director of IAU OAD
  - George Miley, IAU
  - Also many in the second row - these are just the main country representatives at the round table
- **George Miley on IAU Strategic Plan 2010-2020**
- Plan on 'Astronomy for Development' began 8 years ago
  - **NOT the development of Astronomy**, different from Astronomy for Development, which is using Astronomy as a tool for Development
  - Philosophy of the plan is based on the link between Astronomy to the pillars of development
  - Optics, Electronics, Computer technologies have all been improved dramatically due to the needs in Astronomy
  - Astronomy is the gateway to Science - Physics, Chemistry, Biology, and Math
  - Astronomy has been the roots of many civilizations, it is an inspirational topic
  - **MOST IMPORTANT** - Astronomy gives you a perspective that helps to put day-to-day life in context
  - Strategy:- Integrated Phased approach to use the right mix of tools for development. It is a bottom up, demand driven plan. It has to be driven by the people in the regions, not by only the '*developed*' countries
  - Nobel prize winning economist - most effective programs in development, in terms of economic return, target children at very young age.
  - But much more than economics, comes back to the perspective provided by Astronomy and space. re: [The Pale Blue Dot](#) by astronomer Carl Sagan. It provides a sense of internationalism and unity at a young age.
    - refer Universe awareness program - <http://uk.unawe.org/>,
    - Universe in a Box for young children - <http://za.unawe.org/press/UNAW1401/>
  - Islamic and Arabic heritage of astronomy needs to be highlighted, awareness increased
  - Political importance of Astronomy for Development:- Resolution at the EU Parliament, emphasizing radio astronomy for Africa. President of China supporting public outreach in Science
  - Astronomy for Development is **Beneficial for Society AND Astronomy**. It needs to be a joint effort between professional astronomers, amateurs, teachers and educational sector.

### **Kevin Govender, Director of OAD**

- OAD Office established in 2011,
- To stimulate people to solve problems, to build capacity to solve problems.
- How can the Science & Technology community help to address the issues
- Development also refers to social benefits, the human capital development, economic growth
- **OAD**  
Office based in Cape Town, a Steering Committee from IAU and NRF, Regional Offices conduct activities of Strategic Plan in specific regions, and the Task Forces, who are experts in respective fields, plus staff and visiting fellows in Cape Town that support the OAD activities.

### **Regional Offices**

A single office cannot handle/identify needs of various locations and regions of the world.

### **Volunteers**

Who support OAD on specific tasks

### **Partners**

Who share the OAD vision and collaborate on certain projects

### **Projects**

- Different types of projects are funded each year by the OAD. Demand for funding exceeds a **Million Euros each year but we have only 110,000 Euros.**
- How do we know which projects work?
- Build on the experience of other/previous projects. A feedback system that shares the best practices, tools and resources

Collaborate with the development sector, with other Sciences

### **Areg Mickaelian, Armenia, South West Asia Regional Office**

- South West Asia Regional Office Agreement signed at the IAU General Assembly, 2015 in Honolulu
- Astronomy Collaboration with neighbouring countries -  
Armenia-Georgia Virtual Obs  
Armenia-Iran workshop
- Traditional history of Astronomy not well known in the world
- Describing the contents of the SWAROAD website: <http://iau-swa-road.aras.am/eng/index.php>
- Describing potential collaborations between South West Asia Office and Arab/Arabic office.

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At 11:00 am UTC+2:00

## [OPENING CEREMONY

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**14:30 UTC+2**

### **Discussion on Steering Committee:**

- led by Suleiman Baraka

### **Presentation on Arab Regional Office**

- introduction to the IAU
- Three Task Forces - Universities & research, Schools & Children, Public Outreach
- History:
  - Idea by Dr. Jamal and Dr. Suleiman, locations narrowed down to Jordan and Lebanon due to their infrastructure.
  - Meeting in Sharjah to discuss the setting up of regional OAD. Outcome was Jordan as the host country
  - Dr. Hamid sent a draft proposal to AUASS council members
  - Resolution passed at the IAU General Assembly for Jordan to be Host Country
  - **Official webpage:** <http://aw-road.auass.com/>
  - Now, Arab World is on the [Astronomy for Development Map](#)

List of Attendees from different countries at the Inauguration [here](#)

### **Session chaired by Dr. Jamal**

- Country by country survey to find out what is going on in each country. This will be used to develop a roadmap for the Arab world
  - Education at Universities: graduate programs, summary of Arab students in graduate and postdoc positions in Astronomy
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1. Roger Hajjar (Lebanon):
    - summary of the Astronomy infrastructure (new observatory in Lebanon - telescope, instruments)
    - Lebanon has received funding for construction of spectrograph

- Lebanon recently hosted the Middle East and Africa Regional IAU meeting (MEARIM III)
- Public and school visits planned at the observatory
- Next in line: developing observatory together with NAOJ (Japan) - planning to put it on highest peak in Lebanon (combined 60cm and 20cm). Control system being developed locally.
- The "market": astronomy clubs; educational companies (schools hire companies to do astronomy etc); two commercial companies selling telescopes in Lebanon; company offering astronomy services - summer schools for kids in Astronomy and science using inflatable planetarium

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## 2. Ahmed Hady (Egypt)

- more than 600 Egyptians in Astronomy field.
- Egyptians noted Astronomy positions for more than 4000 years
- Helwan Observatory has several telescopes
- Kottamia observatory operating since 1962 has the biggest telescope (1.9m) renewed in 2005-2008
- solar eclipse in 1952 observed by Egyptians and tourists
- Modern Astronomy education started in 1932 - Cairo University (Astronomy, Space & Meteorology department)
- Egyptian Astronomers have published over 200 peer reviewed papers
- In future would like to build 10m telescope in Sinai in Egypt
- No big telescopes in the area
- 3 big Astronomy departments in Egypt, National institute of Astronomy (300 staff) has a big telescope and will have another big one in a few years.
- 2012 IAU General Assembly: idea of large telescope was presented to IAU executive committee. They recommended that any such effort should be a bottom-up approach, from the concerned region, involving the local astronomers and community.  
(Sinai region is very important for Egypt. Future big telescopes could come up here)

Comment from George Miley - we want more discussion on the efforts on **Astronomy for Development** in the regions, on schools and education rather than research level **development of Astronomy**

## 3. Mamoun Nawafleh (Jordan)

- Showing pictures of Petra and talking about archeoastronomy surrounding this world heritage site
- Many sun clocks in Petra
- Several features on the building structures in Petra refer to constellations
- Markings on building aligns with shadows only in certain times of year
- Many civilisations used water reflectors to measure movements in the sky

(Comment from moderator - focus more on astronomy for development activities)

4. Ali Taher Sharaf edeen (Sudan)

- Talk prepared in Arabic, will be summarized in English later
- People do not tend to specialise in Astronomy/Natural sciences because they do not see future careers in it

16:20 UTC+2 - [BREAK TIME followed by presentations from Syria, Bahrain ]

5. Muhammed Al-Assiri (Syria)

- Talk in Arabic
- Showing the video on their submission for the IAU's name an exoplanet programme (results not public yet)
- Many activities with children (many children currently out of school because of situation in the country)
- Use a small planetarium for outreach
- Several appearances on TV
- Website: <http://www.saaa-sy.org/>

6. Shawqi Al-Dallal (Bahrain)

- (Visit from discoverer of the Higgs Boson particle)
- Astronomy started in 1978 with a small telescope, then a 16inch in the 80s.
- 1991, founded the Bahrain Astronomical Society- activities, scientific discoveries,
- run many workshops each year

7. Mohammed Talib Solami (International Astronomical Centre in UAE)

- based in Abu Dhabi, founding member of AUASS,
- National Astronomical Center founded in 1998 in Jordan with support of AUASS
- interest in Astronomical observations
- around 2010, increased involvement in more generic Astronomy applications when IAC was founded in Abu Dhabi
- Website: [www.astronomycenter.net](http://www.astronomycenter.net)
- Network of observers around the world (around 100 members), publications on website
- UAE first Astronomical Conference in cooperation with Emirates Astronomical Society (several other Astronomical societies in UAE) on 'Applications of Astronomical calculations' attended by 106 participants from 26 countries
- Another conference in 2010 on 'Role of Astronomy in Islamic society: Applications in Islam, Education and Environment" - proceedings on website
- Public awareness & outreach - transit of the International Space Station, observations of Saturn
- Cooperation with New York University, schools in Abu Dhabi and Dubai,

- Developed Software to calculate sunrise, moon rise times, interesting Astronomical events. Also developed Android/iphone application - 'Astronomy Events'
- Workshops: visitors from Iran, Iraq, 6day workshop on telescope use in Libya, delivered course for National Center for technology officials from Saudi, talk to the King of Morocco
- Satellite reentry: daily alerts to members on reentry times, locations. Several videos of satellites reentering
- WT1199F UAE Airborne Mission: the team successfully observed and recorded the entry of the satellite from a plane (total of 24 high tech cameras in the plane - the UAE camera was the best to record the event). Mission had a scientific objective to study the reentry analysis
- UAE Astronomical Camera Network: network of cameras to record meteor events in the sky and perform analyse the events.

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**END 17:45 UTC+2**

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## **Day 2, December 03, 2015**

09:00 am UTC+2

### 8. Mashour Wardat (Jordan - Al-bayt University)

- Al-bayt University established in 1992, Masters degree in 1994
- 10km from Al-bayt University is a large refugee camp - need programmes for that camp.
- More than 80 MSc graduated from three universities
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- Need to re-initiate astronomy at Al-bayt - need new instruments for telescope on roof of university
- Jordan has more than 260 clear nights - about 100 photometric
- Goal of the office:
  - Target group 1: Teachers and students
  - Target group 2: Families and societies
  - Target group 3: Refugees (there are more than 3 million refugees mainly from Syria and Iraq. About 40% of Jordan are refugees!)
- Would like to establish an astronomical camp - close to the city that can be easily reached - for Astronomy observations, courses.

### 9. Demitry Wiebe, Russia (Russian academy of Sciences)

- 4 major Astronomical centers in Russia
- Apart from professional Astronomy, there is amateur Astronomy community

- challenge - Children's books are often organized and prepared by people with little Astronomical knowledge
- 2 major Astronomical festivals in Russia each year
- But Astronomical knowledge among people is very low - so people tend to believe in myths and misconceptions.
- one of the main obstacles in Russia is the language. Level of English knowledge is low.
- In spite of significant professional Astronomical community, public involvement is low. Russian caucus for Astronomy for Development would help a lot.

#### 10. Suleiman Baraka (Palestine)

- Despite the many problems, we are trying to make a difference. (some parts of the speech in Arabic)
- We had a 4 inch telescope since 2002. But was destroyed in 2008.
- Six groups of amateur astronomers now working in the state, encouraging others to come and work.
- Found an old script in Gaza talking about Astronomy - 600 years old. Someone was observing from the mountains of Hebron. Now, we are restarting Astronomy in the region.
- Gaza -was UNESCO chair;
- Telescopes provide freedom for the people, break out of the cocoon.
- A 8 inch telescope was brought from Europe in a diplomatic bag.
- Astrophotography: photos taken for a citizen science project and sent to Harvard
- hope to hold a large gathering of Arab astronomers in a few years so their students can meet other professionals.
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#### 11. Monah Ambar (Kuwait)

- Talk delivered in Arabic

#### 12. Jamal Mimouni (Algeria)

- Talk about professional, amateur astronomy in Algeria and Astronomy for society
- Comparing Physics v Astronomy: Astronomy makes it easy to popularize Science
- Professional astronomers should have professional knowledge &
- Astronomy in Algeria: many scholars were working in the field. (*some parts in Arabic*)
- In the 90s, there were some programs in Astrophysics. Now, there are two programs in Astrophysics. And two observatories.
- Astronomical clubs in Algeria running activities.
- Activities: observing, teaching, at university level, schools. linked to Big astronomical events eg. 2005 annular eclipse,  
(*some parts in Arabic*)
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13. Randa Asa'd (American University of Sharjah, UAE)

- A group in Harvard - translated into Arabic for Arab astronomers.

14. Awni Khasawneh (Jordan)

- Present and future Astronomy in Jordan
- There is a 40cm telescope, in a tourist location
- Jordan: unique location, good weather, 300 sunny days per year. Telescope Site selection - 3 sites have been chosen
- A study shows that Nabateans used Astronomy
- All Arabs, especially Bedouins, were dependent on Astronomy for travel, directions.
- Qasr Amra, Jordan (723-743AD)
- Crescent observation committee: formed in 1964, observing and calculating lunar months
- University of Jordan: has a telescope built in 1962, mirror grinding workshop this year.
- RJGC: established 1965, <http://www.rjgc.gov.jo/Default.aspx?lang=en> (conducting all kinds of surveying (terrestrial, air and space) for the purposes of the preparation of all types of maps)
- RJGC also member of Crescent observation committee
- Jordanian Astronomical Society (JAS); very active, celebration of Astronomical events, school workshops and camps. A camp located 120km east of Jordan.
- AUASS (Arab Union of Astronomy & Space Sciences) <http://www.auass.com/index.php/en/>
- Islamic crescent observation project: organized originally by AUASS and JAS.
- Institute for Astronomy & Space Science (IAS): (see yesterday's talk)
- supervising masters students at IAS
- UN regional center for technology & space science: 16 Arab countries have signed the agreement. Now granting master's degree in GIS & Remote Sensing. Also organizing many short courses
- 31 meter Radio dish used for telecommunication. Looking at using for Radio Astronomy and connect to VLBI
- Planetarium 150 seats,

15. Hamid Al-Naimy (Sharjah)

- Sharjah Center started in 2013. Second stage in 2016, biggest in the Arab world of its kind.
- Space Science Research Center & providing knowledge to the public
- a planetarium, 200 seats,
- Three observatories, telescopes are in one mount.

- Equipment bought in London for the Sharjah Center for Astronomy & Space Sciences
  - 1 meter new telescope, at 1km above sea level. The mirror construction technology/process will be patented later
  - In September next year, Msc in astronomy & Astrophysics, Msc in space technology, will be offered.
  - With RAS(Royal Astronomical Center), UK, they will build a Mars probe.
  - Sharjah Center is focal point for tourists, students, research,
  - First eschelle spectrograph of its kind at this observatory, telescope is remote and robotic.
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11:05 am UTC+2 - END OF SESSION 1  
COFFEE BREAK

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16. Mazen Jouaneh (Jordan)

- Private company, Esri Applications Prototype Lab, dealing with GIS technology
- hi res maps from Landsat satellites
- GIS web portals and on desktop, online store
- describing how the images/data are collected
- different types of analysis are done on the images
- Live map of satellites: <http://maps.esri.com>
- automatic software to process imagery from drones
- 3D video: rule based software that builds 3D models; applications available on mobile app stores, build own apps
- New product: similar to Google Earth, called ArcGIS Earth.

**Afternoon Session - Open discussion will be followed by the closing ceremony**

17. Kevin Govender, IAU-OAD

- Consolidated Business Plan: for a big picture of the regional office and the OAD, helpful to get the overall structure, for funders, donors etc
- Plan Basic structure: uses objectives, indicators, and strategic priorities for each of the offices. Also what are the challenges, risks, mitigation, resources that the office(s) are making available. The plan will also contain budgets and projections, thus providing a clear view of the entire Astronomy for Development network.
- The plan will also evolve as more regions join us.

- Within regions, there might be need for country coordinators/sub-regional coordinators. Allow the community to engage, don't impose regulations
- Innovative ways to use Astronomy for Development: eg. how can Astronomy play a role within the refugee camps in Jordan? how can Astronomy impact sustainable development?
- Transparency
- being Dynamic: change according to needs
- and Humility: Astronomy doesn't know everything. we need to engage with other communities & work together to make a difference

## **Summary of the discussion (as sent to Chair)**

### **1. Discussion on 2021 Goals**

- Establish astronomy as a component of curriculum at schools (important to have books/resources; explore Galileo Teacher Training Programme - GTTP; different motivations for doing astronomy: some are cultural, some physics related)
- Establish at least one teacher training or GTTP/UNAWWE programme/workshop in each country
- Establish compulsory astronomy course at university level (note there is difficulty with some decision makers; this was tried in Sudan and challenge was having teachers to run it; however, if it is not compulsory then it is not adopted)
- Development and wide distribution of books/resources in Arabic (especially resources for children e.g. toys, teaching materials, etc.)
- Organise at least one coordinated public outreach activity across Arab world once per year (programme will be implemented at the same time across all countries)
- Ensure Arab participation in existing networks (e.g. AAVSO, other international amateur groups, Globe at Night, Global Astronomy Month, etc)
- Consolidate information and communicate regarding the existing activities in the region e.g. identify astronomical activities in each country, which that country is known for and publish these online

### **2. Discussion on Objectives**

- Establish more astronomical societies
- Define events (e.g. astronomy days) that can be recognized across the region
- Develop astronomical toys, educational resources for children, astronomy playgrounds, astronomy buses, etc.
- Develop structured programme for refugee children (use astronomy for inspiration, technical subjects/skills). Such a programme can be expanded across region.
- Establish "Training of trainers" programme
- Conduct fundraising and lobbying activities for projects e.g. refugee project

- Arrange astronomical trips both for outreach and for university training/research (e.g. to facilities in Algeria, Morocco, Sharjah, Lebanon, Armenia, etc)
- Organise regional summer schools (e.g. Byuarakan international summer school in Armenia, Lebanon summer school)
- Develop of Astrotourism in the region (see project in Armenia and in Sharjah, as examples)
- Maximise on the use of existing research facilities through: (i) series of Arab summer schools moving around facilities; (ii) encourage movement between Arab Universities
- Twinning programmes between universities (inter-Arab MOUs); see existing consortium of Arab universities and build on this – actively pursue exchanges; make recommendation to union of Arab universities
- Link astronomy clubs e.g. project between Jordan and Japan
- Establish a large facility in the region (site testing has already been done)
- Consider specific topics:
  - Astronomy-religion-philosophy
  - Astronomy and Astrology (Address challenge in distinguishing between astronomy and astrology)
  - Astronomy and journalists: establishing relationships with journalists so they know who to call for astronomical news/comment

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## LUNCH BREAK

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### Closing Session:

- *(in Arabic)*
- Special Poem in Arabic (& English translation) read out by Ali Taher Sheraf Edeen from Sudan to mark this event

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## END OF SESSION & INAUGURATION

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