



# *SESAME*

**S**ynchrotron-light for **E**xperimental  
**S**cience and **A**pplications in the **M**iddle **E**ast

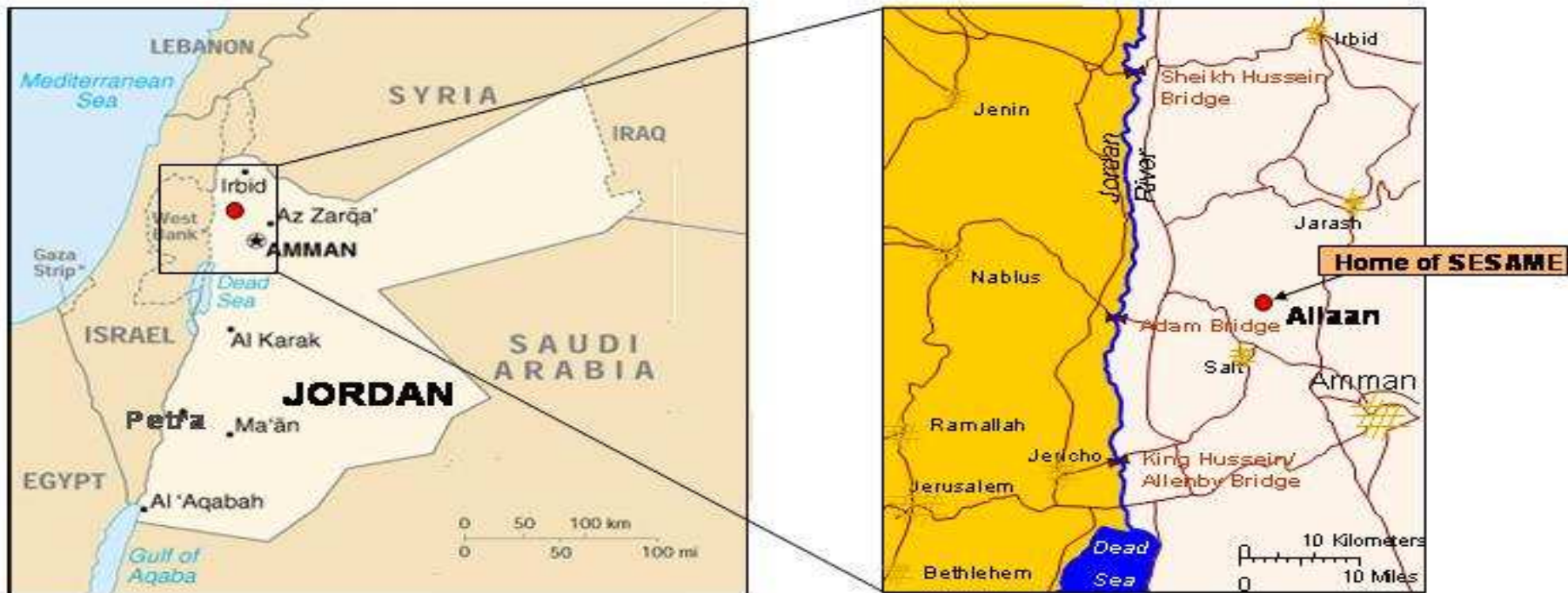
*Khaled Toukan*  
*Director*

**IAEA, May 29, 2013**



2008 11 17

# Location of SESAME



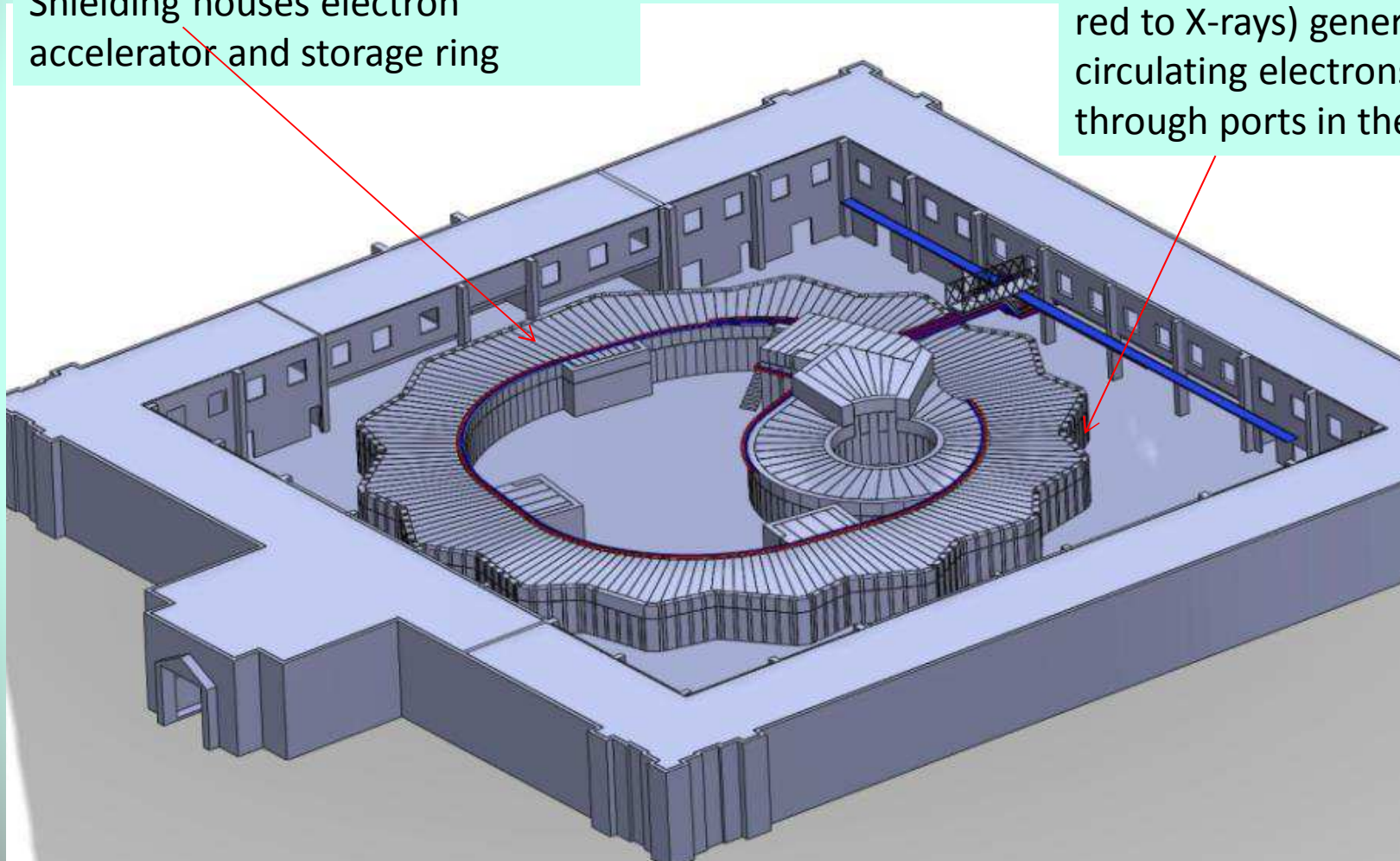
**SESAME location in Allan, Jordan**



## Inside the SESAME Experimental Hall Schematic

Shielding houses electron accelerator and storage ring

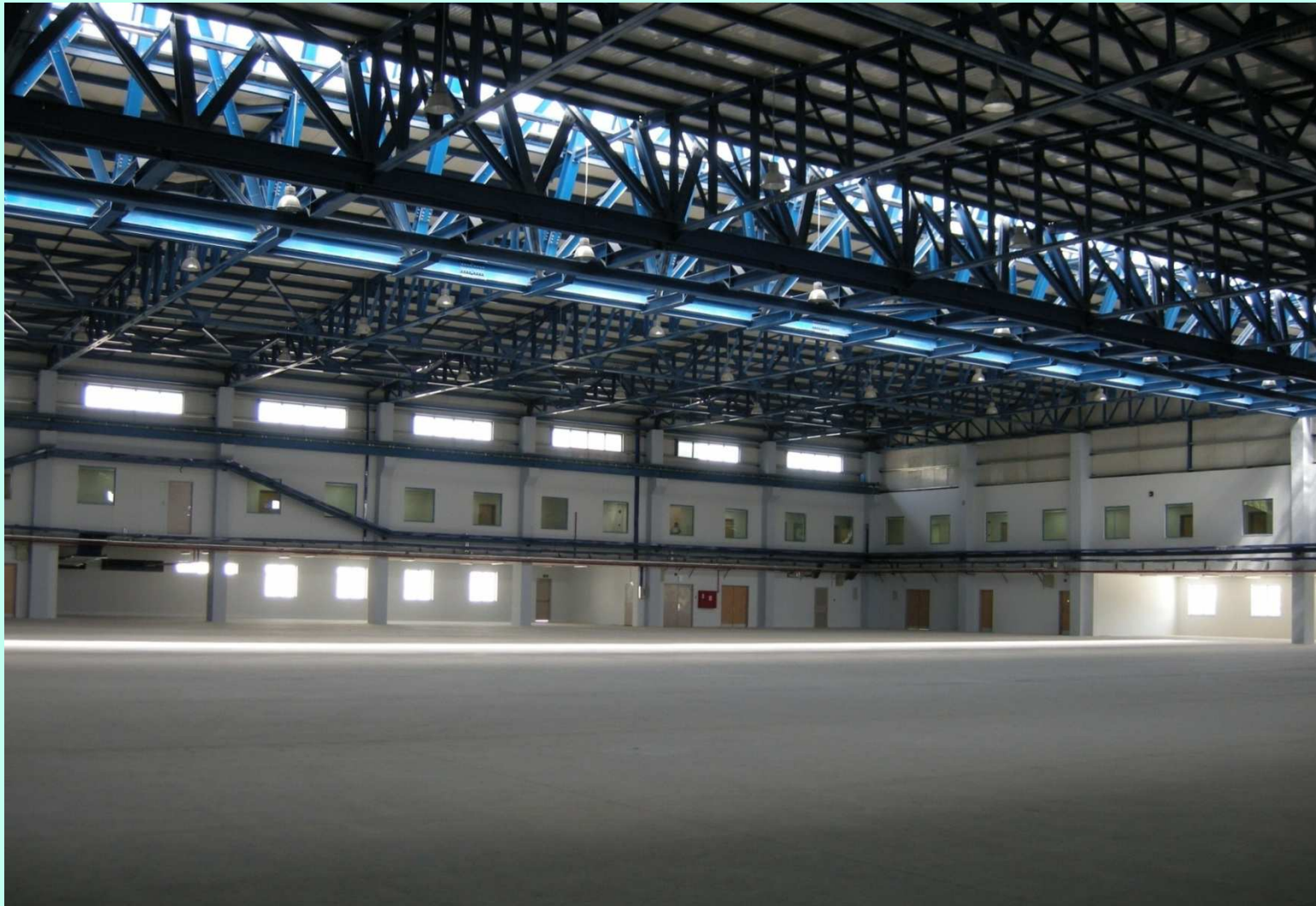
Intense beams of light (infrared to X-rays) generated by circulating electrons exit through ports in the shielding





## SESAME GROUND BREAKING CEREMONY - 6 JANUARY 2003





**Inside the SESAME Building; May 2008**

# Shielding Under Construction, November 2010



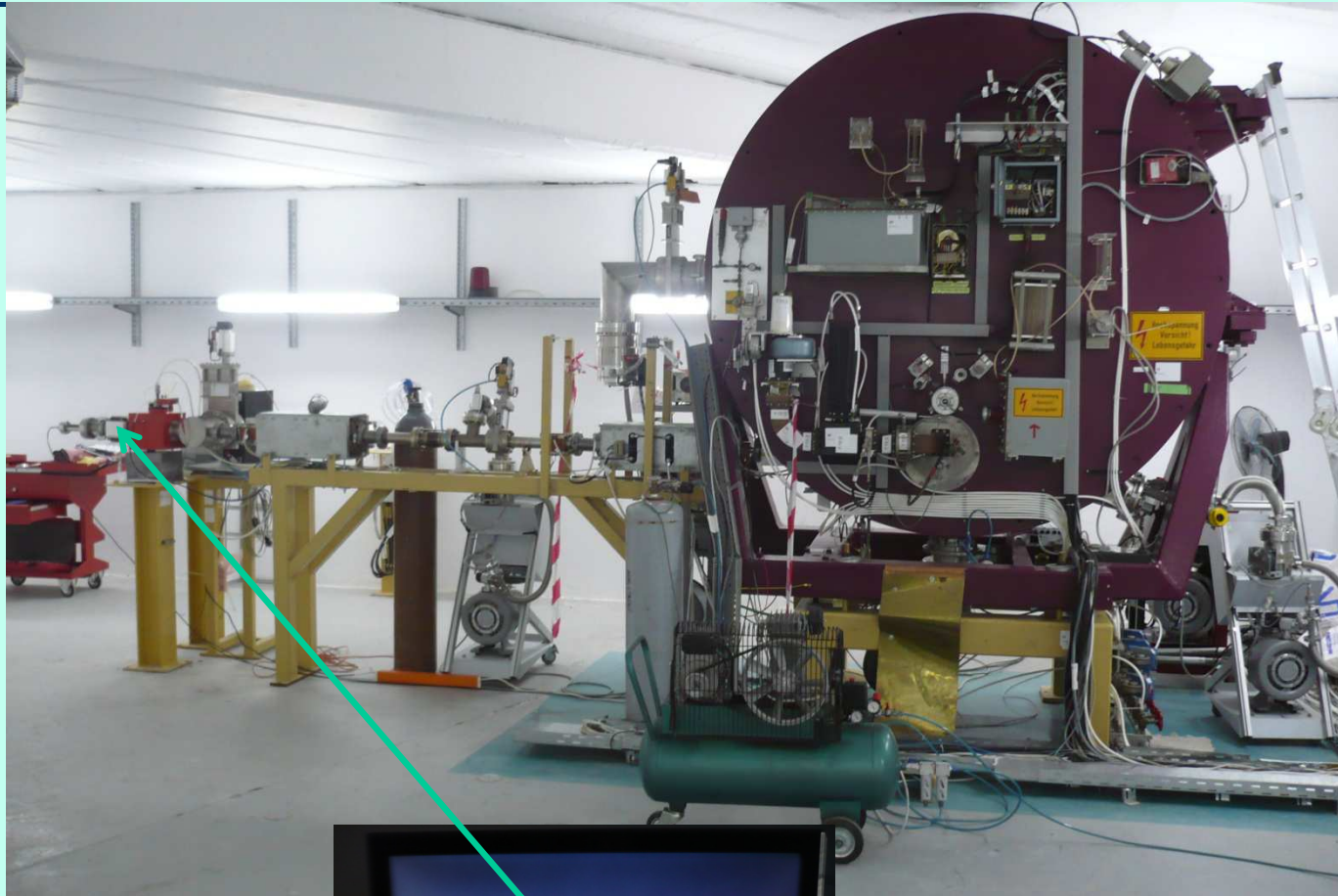


## Shielding Completed, May 2011





# Beam in the Transfer Line 1 – (2012)





## Open Roof of the Booster Area, Magnets Installed





# Cooling System and HVAC



**Installation of ducts**

# Cooling Towers



# Booster Air Conditioning Unit



# Cold Water Tank



# Heat Exchanger





# SESAME Experimental Hall

## May 2012





Energy; **2.5 GeV**

Circumference; **133m**

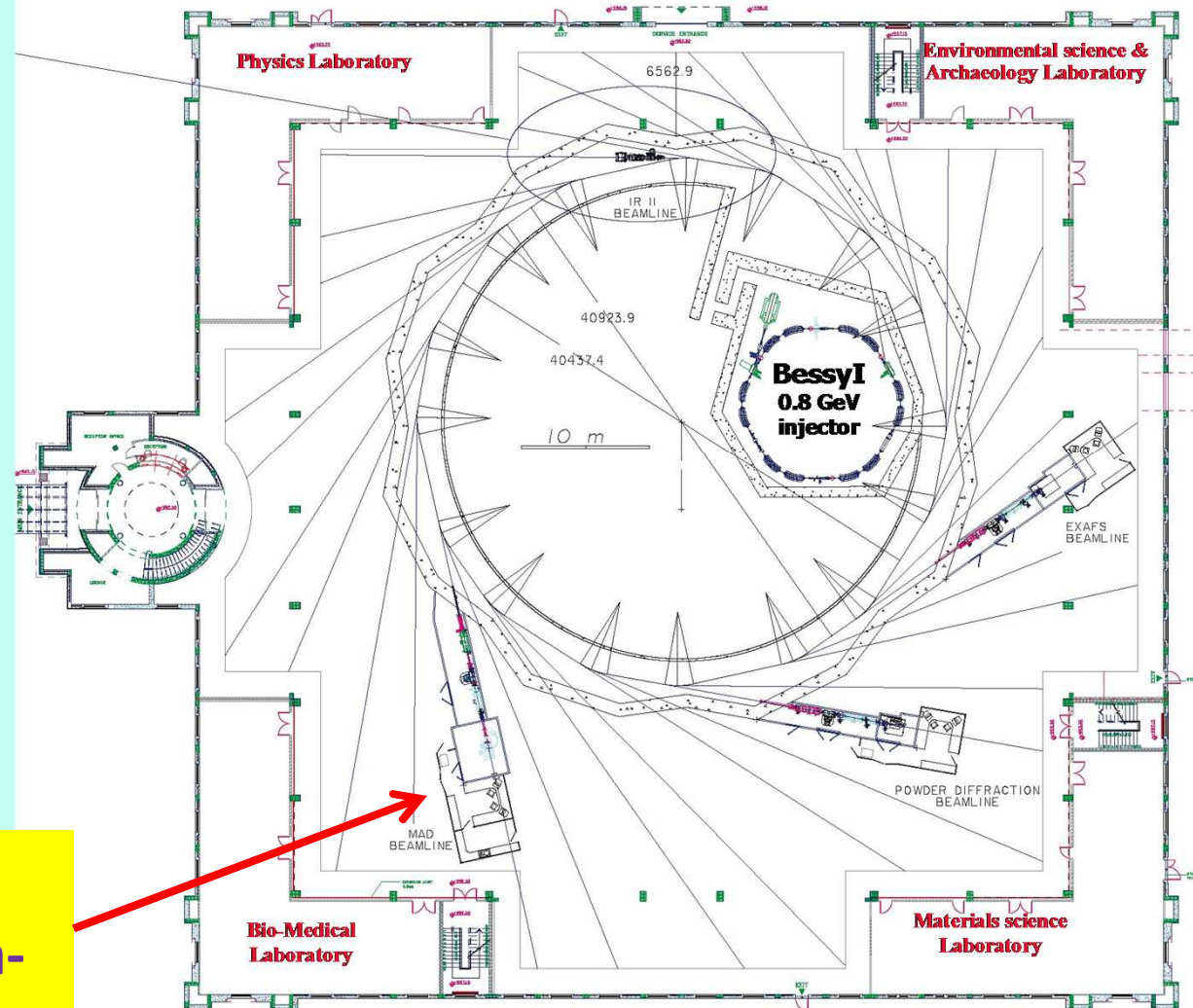
12 Insertion Devices

13 Bending Magnet  
beamlines

Maximum beamline  
length; 37m

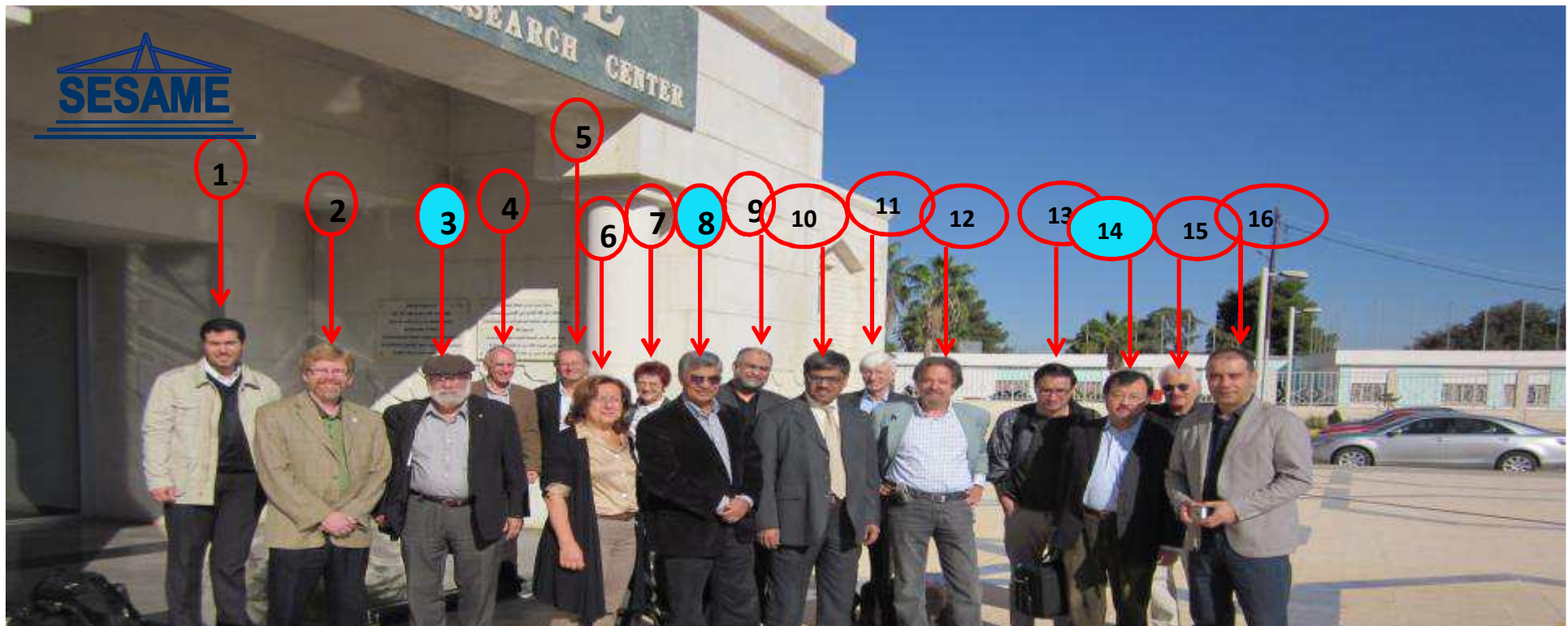
Space for future full  
energy injector in  
main ring tunnel

Beamlines focus  
intense light (infra-  
red to X-rays) on  
experimental  
targets



**SESAME; under construction in Jordan**

[www.sesame.org.jo](http://www.sesame.org.jo)



**SESAME benefits from the expertise of leading world scientists who serve on the Scientific & Beamlines Advisory Committees (seen here in November 2010) and the Technical Advisory Committee**

1- SESAME (Jordan) 2- CLS (Canada) 3- Stanford Univ. (USA) 4- ALBA (Spain) 5- Soleil (France) 6- Sabanci Univ. (Turkey) 7- Elettra (Italy) 8- ALS (USA) 9- Soleil (France) 10- SESAME (Jordan) 11- Oxford Univ. (UK) 12- CERN (Switzerland) 13- Al-Quds Univ. (Palestinian Authority) 14- LBNL (USA) 15- PSI (Switzerland) 16- Hacettepe Univ. (Turkey)

# Training Programme

- **Users Meetings, Workshops, Individual Training (Visits, Fellowships..)**

- **Funding from**

International Organisations: **IAEA, UNESCO, ICTP, ESRF**

External National Organisations & Synchrotron Labs: **Brazil, France, Germany, Italy, Japan, Portugal, Spain, Sweden, Switzerland, Taiwan, UK, USA (DoE)**

Organisations from Member States: **Cyprus, Egypt, Iran, Israel, Jordan, Turkey**

Scientific Societies: **APS + EPS + IOP + DPG + ACS + NAS**

Foundations: **Canon, Lounsbery**

LinkSCEEM Project (Cyprus): ***High Performance Computing (HPC) in the Eastern Mediterranean Region***

**Topics include: *Accelerator Physics , Beamlines, Scientific Applications***



Monday, 23 January 2012

News

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## SESAME | SYNCHROTRON-LIGHT FOR EXPERIMENTAL SCIENCE AND APPLICATIONS IN THE MIDDLE EAST

### SESAME'S

[Members & Delegates](#)

[SESAME In Press](#)

[MoUs & Agreements](#)

[Information Material](#)

### LATEST NEWS

[SESAME Live Cam is launched](#)

[SESAME continues to make good progress towards operation in 2015](#)

[SESAME Makes Progress - Journal of Synchrotron Radiation](#)

### PRESS RELEASE

**" SESAME continues to make good progress towards operation in 2015 "**

The SESAME Council met in Ankara on 7 and 8 December 2011. Welcoming delegates, Dr Zafer Alper, President of the Turkish Atomic Energy Authority, stated

[READ MORE](#)

### NEWS HIGHLIGHTS

[9th SESAME Users' Meeting & SESAME-JSPS School](#)

[9th SESAME Users' Meeting and SESAME-JSPS School Summary](#)

[9th SESAME Users' Meeting SESAME - JSPS School 12 - 16 November 2011](#)

[Benefits and Obligations of Members of SESAME](#)

### THE MICROTRON FULL ENERGY BEAM SHOWS UP

On Monday November 28, 2011 at 1:13 AM, the Microtron beam has been successfully extracted from its final orbit (orbit 42) to be the full energy beam with 22.5MeV

[READ MORE](#)

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### SESAME ON MAP



### CONTACT US

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[www.sesame.org.jo](http://www.sesame.org.jo)

**SESAME is a Competitive  
3<sup>rd</sup> Generation Synchrotron  
Light Source**



**Further information about SESAME and potential SESAME Users can be found at**

**<http://mag.digitalpc.co.uk/fvx/iop/esrf/sesamebrochure/>**

and

**<http://mag.digitalpc.co.uk/fvx/iop/esrf/sesamepeople/>**

*These can be downloaded from the SESAME website*

**[www.sesame.org.jo](http://www.sesame.org.jo)**

***Thank you***