Herwig Schopper - a century in physics

SESAVE

Success Continues Despite Challenges

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CERN

Friday March 1, 2024







Science for Peace

Two organisations created under the umbrella of UNESCO:



CERN

Conceived late 1940s - aim:

- Enable construction of a facility beyond means of individual countries
- Foster cooperation between peoples recently in conflict



SESAME

Conceived late 1990s with the same aim:
Members: Cyprus, Egypt, Iran, Israel, Jordan, Pakistan, Palestine, Türkiye
SESAME is more challenging, because of the persistent political crises engulfing the Middle East

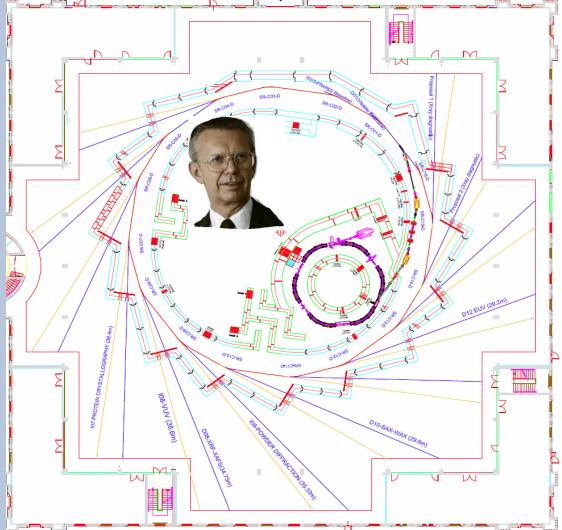


SESAME

Herwig Schopper

CERN& SESAME







Building a Culture of Peace

Herwig Schopper met the enormously difficult challenge of bringing Cyprus, Bahrain, Egypt, Iran, Israel, Jordan, Pakistan, Palestine and Türkiye to the table and persuading them to put aside historical and political differences, and to jointly work together for establishing a scientific centre of excellence in the Middle East. A real success story of science diplomacy.



Jordan Joins SESAME

During a tour of the Middle East in 1999 to identify a host state, Schopper met with representatives of universities and other organisations in Jordan. However, no meeting with government officials could be arranged, and no commitment was obtained.

When Schopper was professor in 1958 at Mainz University in Germany, he had supervised a Jordanian student, Isa Khubeis, who became later Vice-President of Al-Balqa Applied University in Al-Salt. In a last bid, Schopper called Khubeis.

After a dinner at Khubeis's house, Prince Ghazi bin Muhammad who chaired the Board of Trustees of Al-**Balqa** Applied University and was a close adviser of King Abdullah II, joined the dinner.

Prince Ghazi was convinced of SESAME's case and immediately arranged a meeting for the next day with King Abdullah II.



Isa Khubeis

Schopper explained to the King the idea behind SESAME. After asking a number of relevant questions and half an hour later, Schopper was handed a letter signed by King Abdullah II, addressed to the DG of UNESCO, indicating that he agreed to host SESAME in Jordan.



With King Abdullah II of Jordan during SESAME Middle East Tour, 1999





With President Arafat of Palestine during SESAME Middle East Tour, 1999





Building a Culture of Peace

In 2000, Schopper presided over a meeting at CERN of the restricted Interim Council (IC) of SESAME to select a host country for SESAME from the seven proposals received.

After several rounds of secret balloting, Jordan was selected as the host country for SESAME.

The parallels to Switzerland's hosting of CERN in Europe are evident.



3rd IC Meeting with King Abdullah II and UNESCO's DG Matsuura, 2000





SESAME Groundbreaking Ceremony January 6, 2003





Receiving Al-Istiqlal Medal of Jordan from King Abdullah II on January 6, 2003





Receiving Albert Einstein Gold Medal from Kōichirō Matsuura, UNESCO's DG, Paris 2004







44 Nobel Laureates endorse SESAME, "as a beacon, demonstrating how shared scientific initiatives can help light the way towards peace", June 2008.



'97

The Dream Comes True

'04

Arab Israeli Cooperation (Dahab) '95 (Venice Gouda, Eliezer Rabinovici)

> German Government agreed to '99 donate BESSY I components to SESAME following the request of Sergio Fubini and Herwig Schopper

SESAME comes into existence, Herwig Schopper presides over Council

Decision to build a new 2.5 GeV ring using BESSY I booster, competitive 3rd generation facility

Rebuild old 0.8 GeV Berlin Synchrotron (BESSY I) in the Middle East, as a basis for a new international centre (Gus Voss, Herman Winick, followed by Tord Ekelof)

Groundbreaking '03

'17

January: First electron beam circulating

16 May: Opening by King Abdullah II

'08

Completion of building



Handover Presidency of SESAME Council, November 2008







High Award for Science Diplomacy



On February 15, 2019, Khaled Toukan, Herwig Franz Schopper, Zehra Sayers, Eliezer Rabinovici and Sir Christopher Llewellyn Smith, were awarded the 2019 American Association for the Advancement of Science (AAAS) prize for science diplomacy for their considerable contribution to the creation and development of SESAME.





SESAME Building

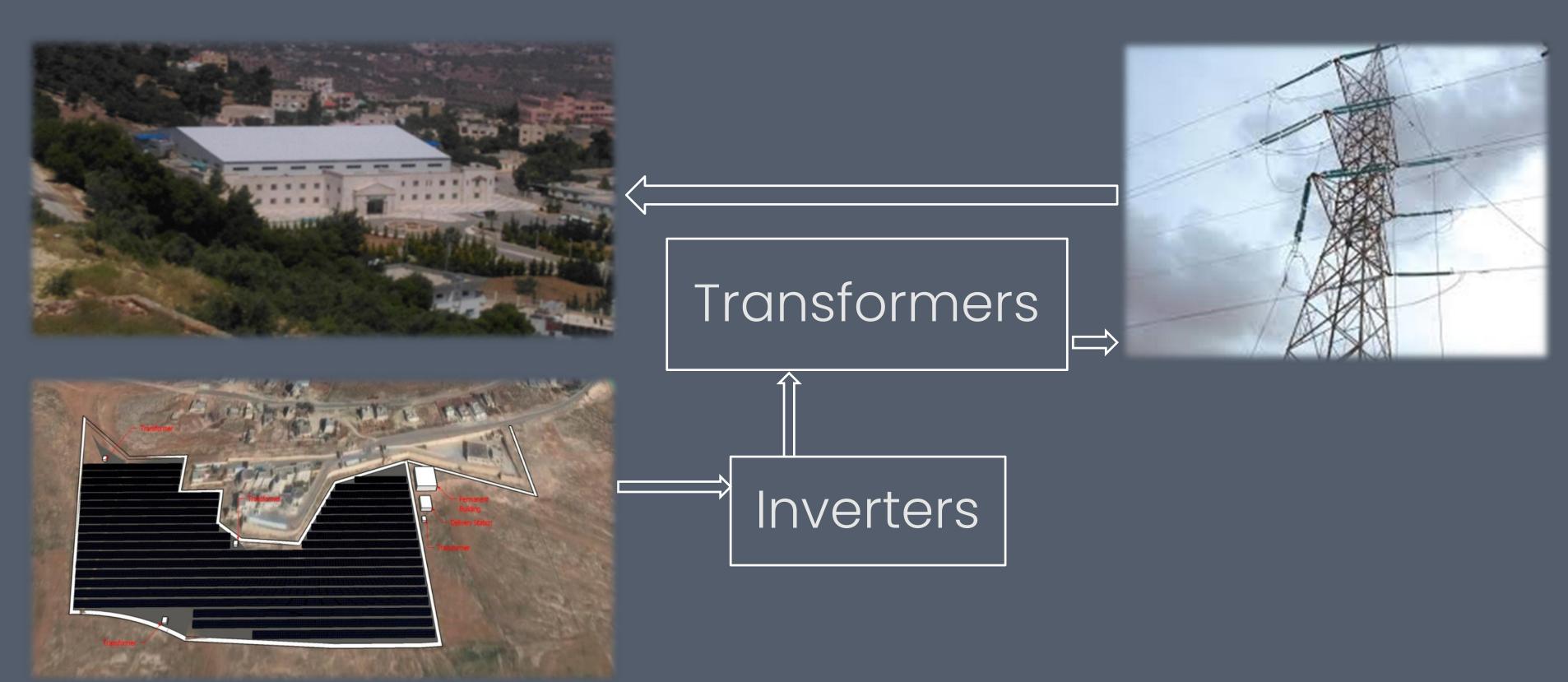


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SESAME Sergio Fubini Guesthouse



SESAME is Totally Powered by Solar Energy





Current Status of SESAME's Five Operating Beamlines

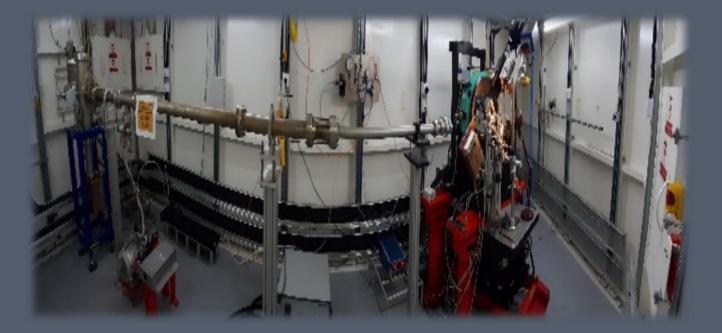
IR beamline

XAFS/XRF beamline

MS/XPD beamline









Current Status of SESAME's Five Operating Beamlines

HESEB beamline



BEATS beamline







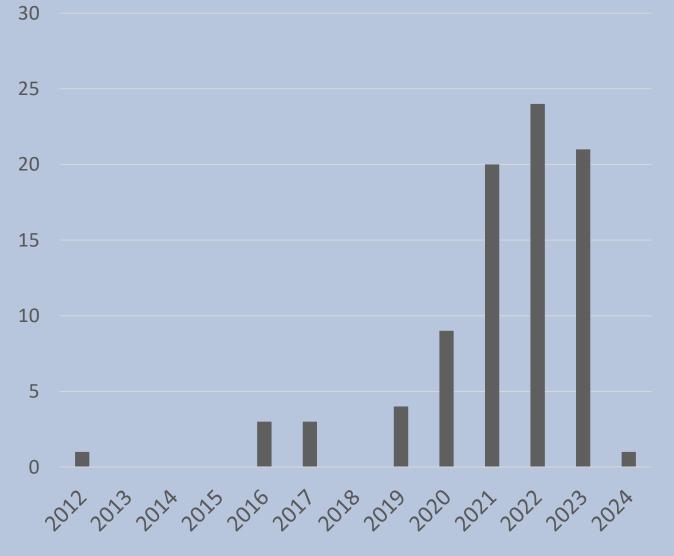
Proposals Submitted to SESAME and SESAME Publications

SESAME

Publications 87

Peer-reviewed publications until January 2024

- Average scientific impact factor > 5
- 25% of publications have IF > 7



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	Proposals Submitted	
CYPRUS	30	604
EGYPT	156	
IRAN	90	
ISRAEL	19	
JORDAN	92	
PAKISTAN	74	
PALESTINE	23	
TÜRKIYE	120	
SESAME Observers (FRANCE, GERMANY, ITALY, RUSSIAN FEDERATION, UAE, UNITED KINGDOM)		52
Potential Members (ALGERIA, IRAQ, MOROCCO, OMAN, QATAR)		24
OTHERS (AUSTRALIA, AUSTRIA, BELGUIM, BOTSWANA, CANADA, COLOMBIA, DENMARK, INDIA, KENYA, MALAYSIA, MALTA, MEXICO, NETHERLANDS, NIGERIA, SOUTH AFRICA, SWEDEN, UNITED STATES)		49
	Totals	729
Total Accepted		350

Call 6, closed on Septrember 30, 2023 **157 proposals** beamtime Jan.-Jul. 2024

AUSTRIA SESAME SOUTH AFRICA NIGERIA CANADA UNITED STATES QATAR UNITED KINGDOM FRANCE BOTSWANA KENYA MOROCCO BAHRAIN IIII CYPRUS DENMARK MALAYSIA PALESTINE AUSTRALIA IRAQ UNITED ARAB EMIRATES GERMANY ITALY ISRAEL PAKISTAN IRAN JORDAN EGYPT TÜRKIYE

INDIA 🔳

0 10 15 20 25 30 35 40 5

*** Call 7, closed on February 29, 2024 – beamtime Sept.-Dec. 2024

