



*Synchrotron-light for Experimental Science
and*

Applications in the Middle East

**Address by Professor Herwig Schopper, President of the SESAME Council,
on the occasion of the "Soft" inauguration
of the SESAME Centre**

Allan, Jordan, 3 November 2008

Your Royal Highness Prince Ghazi Bin Muhammad,
Your Excellency Mr Koïchiro Matsuura, Director-General of UNESCO,
Your Excellencies Ministers of Education and Scientific Research and Planning,
Your Excellencies Ambassadors,
Distinguished Delegates of Members and Observers of SESAME,
Ladies and Gentlemen,

The acronym SESAME has been chosen because in many cultures it carries the connotation of 'opening doors'. Indeed we hope it will open many doors, but today we have the great pleasure and honour to welcome you here to open the doors of this beautiful building.

Ten years ago such a project seemed a far dream, considered by many as completely unrealistic, mainly because of the difficult political situation in the region. The only chance to realize SESAME was to create it under the umbrella of UNESCO following the earlier example of CERN, the Elementary Particle Physics Laboratory at Geneva. In June 1999 at UNESCO delegates of 12 Governments in the Middle East and the Mediterranean region unanimously adopted a resolution to create an international centre. Later Director-General Koïchiro Matsuura made it his personal objective to present and defend the project at UNESCO's General Conference which, after discussions in its various sub-bodies, led to the final approval in May 2002 of SESAME as an intergovernmental organisation. When this was being done, SESAME was described as a "*quintessential UNESCO project combining capacity building with vital peace-building through science*" and it was referred to as a "*.. model project for other regions*".

SESAME became after CERN the second research laboratory founded with two main objectives, namely to promote science and technology in the region and to offer invaluable

opportunities to develop mutual confidence and tolerance among people from different traditions, religions and races in line with UNESCO's slogan 'science for peace'.

On its way SESAME encountered some serious difficulties. Germany was prepared to donate the whole BESSY I facility at Berlin following a suggestion by Gustaf-Adolf Voss and Herman Winick. However, the proper dismantling, recording, packing and transportation of the equipment had to be financed by SESAME and the required funds had to be found within a few months since the building housing BESSY I was already committed for other purposes. Within the short time available only a small part of the necessary sum could be collected from SESAME Members. In my desperation I turned to Mr Matsuura who had been appointed Director-General of UNESCO a few weeks before. I plainly confessed that without his help the project would be dead. He took a very brave decision, provided the missing funds and thus saved the whole project.

The choice of the site of SESAME was a difficult one. Seven countries had proposed more than a dozen sites. The conditions for the final decision were that all scientists from the world must have access to the laboratory, that the host State should provide the site and finance the building, and that special privileges should be given to the international laboratory. Only a few States in the region were able to comply with such conditions. I learned during my career that important decisions have to be prepared during informal contacts, such as coffee breaks or dinners. Indeed, one of my former students, Isa Khubeis, arranged a dinner in June 1999 at his home at Amman which was attended by Khaled Toukan and Prince Ghazi who arranged an audience for the next day with H.M. King Abdullah II. Prince Ghazi became in this way one of the founding fathers of SESAME. After listening to our presentation His Majesty immediately agreed to host SESAME in Jordan and this offer was accepted by the SESAME Interim Council. This was the real beginning of SESAME which would not have progressed as fast in the past years without the personal interest and the continuous and multiple support of King Abdullah II. We owe His Majesty deep gratitude for his help for a project which will promote not only science and technology but will be beneficial for the whole region.

Of course, the support of the Government of Jordan during the past years was essential, and without the untiring efforts of Khaled Toukan in his capacity as Director of SESAME the present state of SESAME could never have been achieved. Setting up an international organization in an environment where the skilled experience is missing is not a simple task. I would like to thank all delegates of the SESAME Members for their efficient, constructive and patient cooperation in Council.

Scientists are usually rather impatient and some of them complain that it is only in a few years that SESAME will only become operational. However, even compared with national projects in Western countries SESAME has made surprisingly rapid progress during the past years. The incredibly fast construction of the building was one crucial element. Within the unbelievable short time of five years it was planned, authorised and built, and is now fully complete. A competent staff could be attracted, and under the guidance of internationally-renowned Directors is doing excellent work. In addition, scientific and technical advice was obtained from

many scientists all over the world, in particular by colleagues who participated in the various advisory committees, and a future users' community has been established which is preparing experiments for the first generation of beamlines. We may claim therefore that science has really started to bloom!

We received financial support for the training programme, an essential part of the SESAME activities, and SESAME received equipment from Observer States. Since details about this have already been mentioned by Khaled Toukan I shall not repeat them here but I express our great appreciation for all this support. We also owe a deep and warm gratitude to the UNESCO staff who during all these years have contributed so efficiently to the establishment of SESAME, in particular Director Maciej Nalecz and Clarissa Formosa-Gauci who provided much more than just the Council Secretariat. To my great regret it is impossible within the time available here to mention all persons and institutions who have contributed to the progress of SESAME and to thank them warmly.

Of course, some hurdles have still to be taken, but I am convinced that they will not prevent the final success of SESAME. Looking at the project from a wider perspective one may comment in the following way. The total cost of SESAME, although difficult to estimate precisely, will be around US\$100 million. About a third of this has been provided by Jordan, an extremely generous support in view of the economic situation of this country. This is in line with general practice concerning the contributions of a host state to an international project and does not impair the international character of the project. More than another third of the total cost has already been obtained or will be provided partly in cash, partly in kind, from Members, Observers or other organisations. The funds still missing are small compared to the total cost of the project and completely negligible in view of the sums spent in the region for infrastructure projects like roads and water. Of course, these are priority undertakings indispensable for the well-being of the population. However, a small fraction of those investments should be dedicated to long-term future aspects such as education and research.

I am confident that the other Members of SESAME will live up to their commitments to assure the successful accomplishment of the project. However, this may turn out to be extremely difficult in some cases in view of the present global financial crisis, and some solidarity among countries will be necessary to overcome these difficulties. I would appeal in particular to the rich Arab countries to put aside some of their political worries and support SESAME, directly or indirectly. If they are not prepared to join immediately more flexible arrangements could be found to enable practical cooperation.

Taking into account its population and wealth the Middle East is lagging considerably behind global averages in research and technology. In the long run this will be detrimental to the countries of the region since innovation is considered the key for long-term prosperity. An additional element gaining more importance is the recognition that national strategies must be accompanied by more creative and well-orchestrated international networks, a field where SESAME can also give guidance. I hope the example of H.M. King Abdullah II will encourage other countries to follow his vision. He recognised the important role of a project like SESAME

as a necessary waypoint for the future development of the region and its economic welfare, and a vehicle for employment and new horizons for the young.

SESAME has passed the point of no return. Hence I thought it would be a good moment to pass the presidency of the SESAME Council to a younger generation. I am very happy that Sir Chris Llewellyn Smith has agreed to preside the SESAME Council from now on. He was one of my successors as Director-General of CERN and has enormous experience in managing a laboratory. I am convinced that with him and all the other dear friends involved in SESAME, the laboratory will also be in good hands in the future. I greatly enjoyed all the years during which I have been intimately involved in SESAME, the friendly cooperation with many colleague scientists, Council delegates, administrators and politicians. I would like to thank most sincerely all those who made this cooperation efficient and enjoyable. For me it was a great satisfaction to see not only citizens from SESAME Members but also from many other nationalities, indeed a rare and impressive blend, sitting around the same table and peacefully discussing SESAME issues. We have become a kind of 'SESAME family'.

My optimism for the future of SESAME is also based on the moral support of the scientific community worldwide. A few weeks ago, the International Union of Pure and Applied Physics (IUPAP) held its General Assembly in Japan. I learned with delight that SESAME became one of the highlights of that meeting and that the President of IUPAP, Professor Ushioda, mentioned SESAME as one of the most important projects to follow closely over the next years, and a resolution endorsing SESAME was passed.

In June of this year a group of Nobel Laureates visited the SESAME site. During a conference that took place at Petra after this, the following declaration was signed by 45 Nobel Laureates:

"We, undersigned Nobel Laureates, commend the remarkable progress made in creating the SESAME Synchrotron Light Source. It will provide a major centre for scientific research, with ownership shared by many nations of the Middle East. Thereby, SESAME, as well as producing educational and economic benefits, will serve as a beacon, demonstrating how shared scientific initiatives can help light the way towards peace. We urge all friends of science and peace to lend their encouragement and support to this exemplary project."

Let me express my warmest thanks to all of you for attending this ceremony and thereby expressing your support for this great project which fosters science and technology and thus contributes to the prosperity of the region and helps to bring about peace.