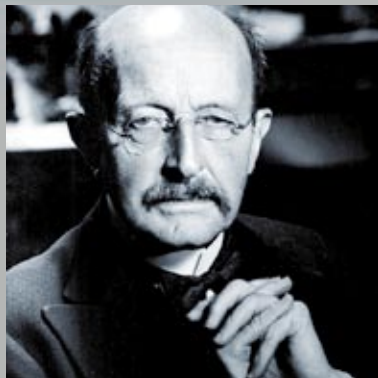




THE MAX PLANCK SOCIETY

**Research in a
global context**

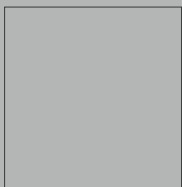
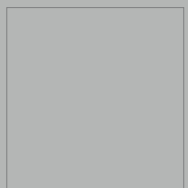
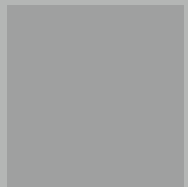
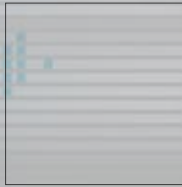




**Insight
must precede
application.**

Max Planck

THE MAX PLANCK SOCIETY

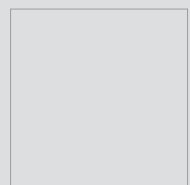


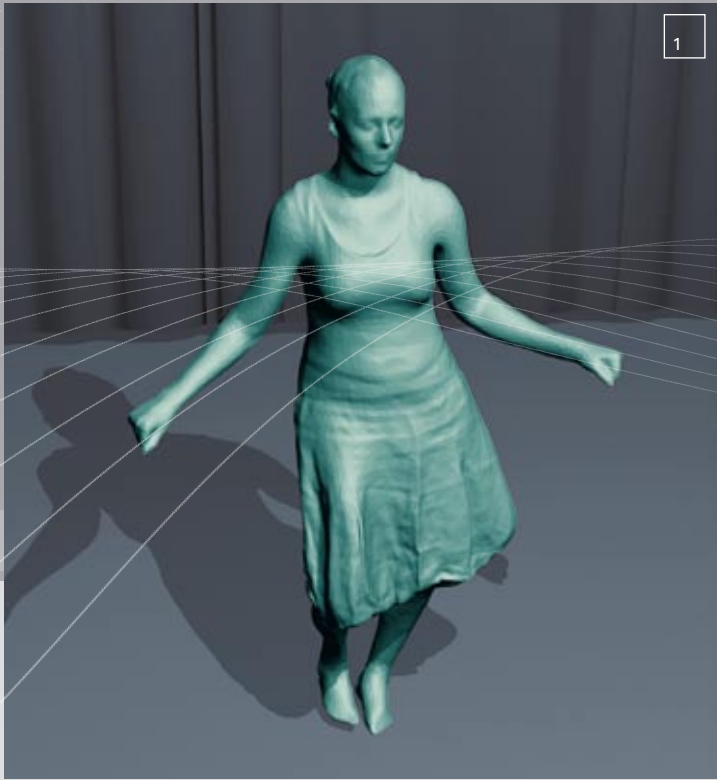
The Max Planck Society is one of the world's leading institutions for scientific research. Its 80 distinct institutes and research facilities are engaged in cutting edge basic research across the spectrum of natural sciences, life sciences, social sciences and the humanities. They are responsible for discoveries and breakthroughs that are of enduring social and economic benefit.

Basic research and the Max Planck Society

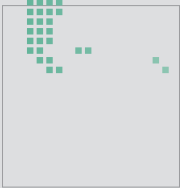
The research of the Society's institutes is grounded upon the principle of co-operation: we believe that in testing the limits of knowledge, other limits - be they national borders or the boundaries of particular disciplines - must be transcended. Researchers the world over speak a common language of science. By integrating each other into their work, their methods and discoveries, each profits from the other. Joint international projects are able to pool huge intellectual and financial resources in order to meet the complex scientific and technological challenges of our time. In fields ranging from astronomy to climate change, energy and health, the issues addressed by scientific researchers are of overwhelming global significance. Max Planck scientists are pushing at the front line of discovery in all of this.

In addition to such cutting edge work in co-operation with the leading established institutions and universities, our institutes are also working closely with partners in new and emerging centers of scientific excellence. Asia is a particular example of an area where the extraordinary dynamism of scientific research mirrors the general dynamism of the region itself. The Germany-based Max Planck Society has thus established an extensive network of global contacts. Through our emphasis on international collaboration, we act as a conduit between German science and the world's best centers of research.

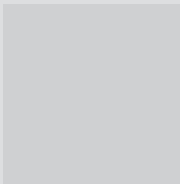




Transatlantic cooperation and support for junior scientists | USA



Asia's growth engine | China





מכון ויצמן למדע

WEIZMANN INSTITUTE OF SCIENCE

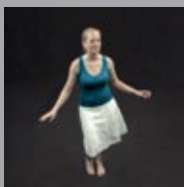
Science paves the way for political relations | Israel

Scientists from the Max Planck Society initiated the dialogue with scientists from Israel long before diplomatic links between the two countries were forged. Max Planck institutes today work closely with universities and research institutions in Israel, particularly the Weizmann Institute of Science.

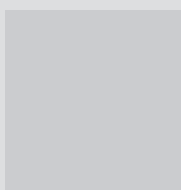


Asia's growth engine | China



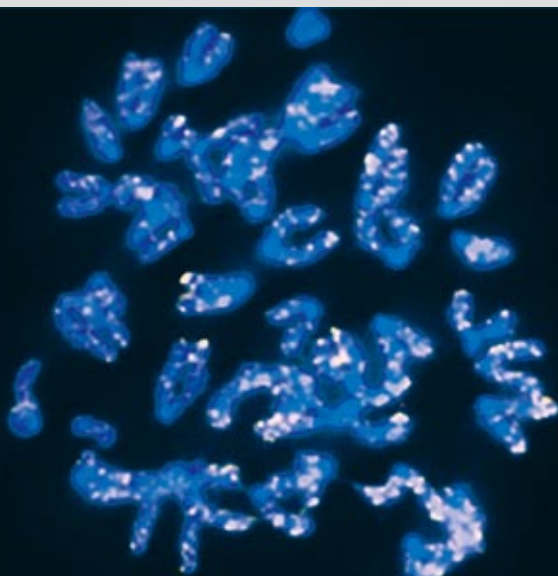


◀ The Max Planck Center for Visual Computing and Communication, an initiative of the Max Planck Institute for Computer Science in Saarbrücken in cooperation with Stanford University, is successfully combining basic research projects with support for gifted junior scientists. Both of these images were created by this joint venture using the new markerless motion capturing process.



Our scientific exchanges with the People's Republic of China began as long ago as 1974. Since then, an intensive process of cooperation has developed with the Chinese Academy of Sciences in particular. Today, China accounts for almost eight percent of all guest scientists from abroad working at Max Planck institutes. The microscope image of evidence of DNA methyltransferase on chromosomes (below) and the 3D image of a head for purposes of genetic examination (fold-out page, front, bottom) are both examples of successful German-Chinese teamwork. ▼

3



The Max Planck Society's international network leads to new discoveries and contributes significantly to the work of outstanding scientists. As recognized centers of excellence, the Society's institutes attract the finest minds from across the world: Each year over 6,000 visiting researchers and junior scientists from more than 50 countries come to work at Max Planck facilities. A third of Directors come from abroad, while the proportion of non-German doctoral students has now reached 50%. Among post-docs, the figure is 80%.

Mobility and support for the next generation

Against this background, the Max Planck Society provides a variety of tools for training and supporting young scientific researchers from all over the world.

For example, the International Max Planck Research Schools (IMPRS) offer exceptionally gifted German and foreign students the opportunity to earn their doctorates under optimal conditions. For young researchers who have completed their doctoral studies, there are also numerous opportunities available at our Max Planck institutes: Scientists selected in international competition can spend five years carrying out a self-defined research project as heads of Max Planck Research Groups.





■ **Insight into the world of science**

The touring exhibition "Science Tunnel" aims to communicate to young people in particular the excitement of being a scientist. On its ongoing international tour, the exhibition has thus far attracted two and a half million visitors.

■ **The IMPRS formula for success**

Together with universities in Germany and abroad, the Max Planck Society has currently established 56 International Max Planck Research Schools offering doctoral training in a vibrant international environment. 60% of graduates are non-German nationals.

■ **Partners throughout the world**

Highly-qualified junior scientists from abroad who return to work at a lab in their homeland after researching at a Max Planck institute can, under appropriate circumstances, head a partner group on their native soil.

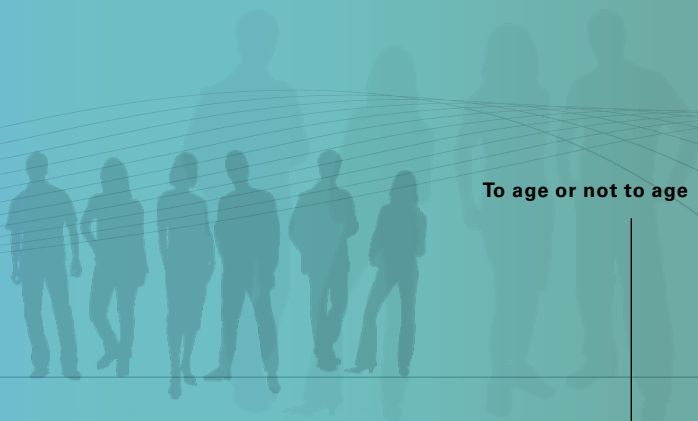
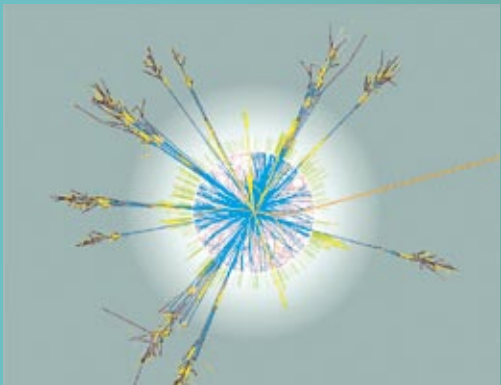




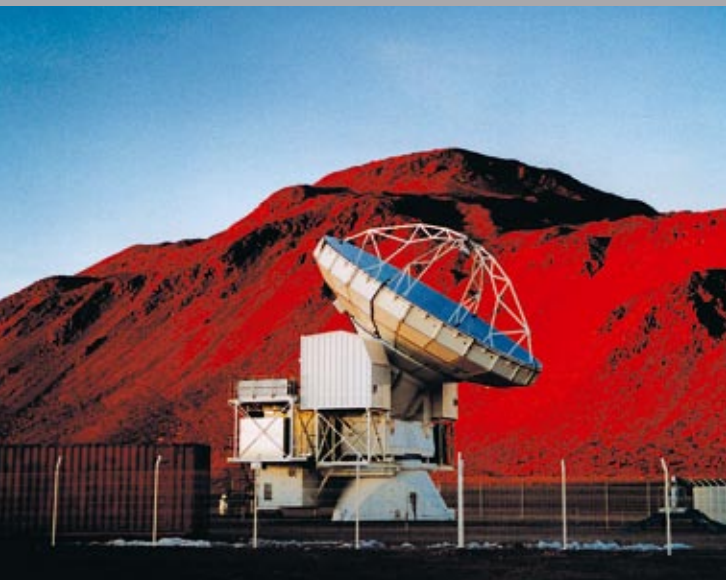
The birth of the stars
Chile



Holding the world together in its inmost folds
Switzerland

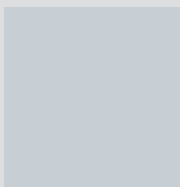


To age or not to age



The APEX telescope set up in the Atacama Desert is an international joint endeavour headed by the Max Planck Institute for Radio Astronomy. It measures radiation from space in the submillimeter range. This radiation holds the key to our understanding of the origins of the planets and stars. The image of the galaxy Centaurus A (fold-out page, front, top) shows jets of matter that originate in the area of the central black hole. The submillimeter data from the APEX telescope are depicted in orange. ▲

CERN near Geneva is the world's largest research center devoted to particle physics. Twenty nations are involved in operating the center. The spectacular experiments conducted using the gigantic particle accelerator are expected to provide clues to the composition of matter and the fundamental structure of the cosmos. The ATLAS particle detector being built by physicists at the Max Planck Institute for Physics together with scientific colleagues from all over the world will also provide CERN with a powerful tool in its search for elementary particles. The illustration (fold-out page, front, center) depicts a simulated collision experiment using the ATLAS detector. ▶

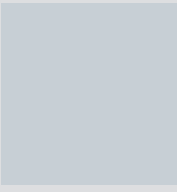
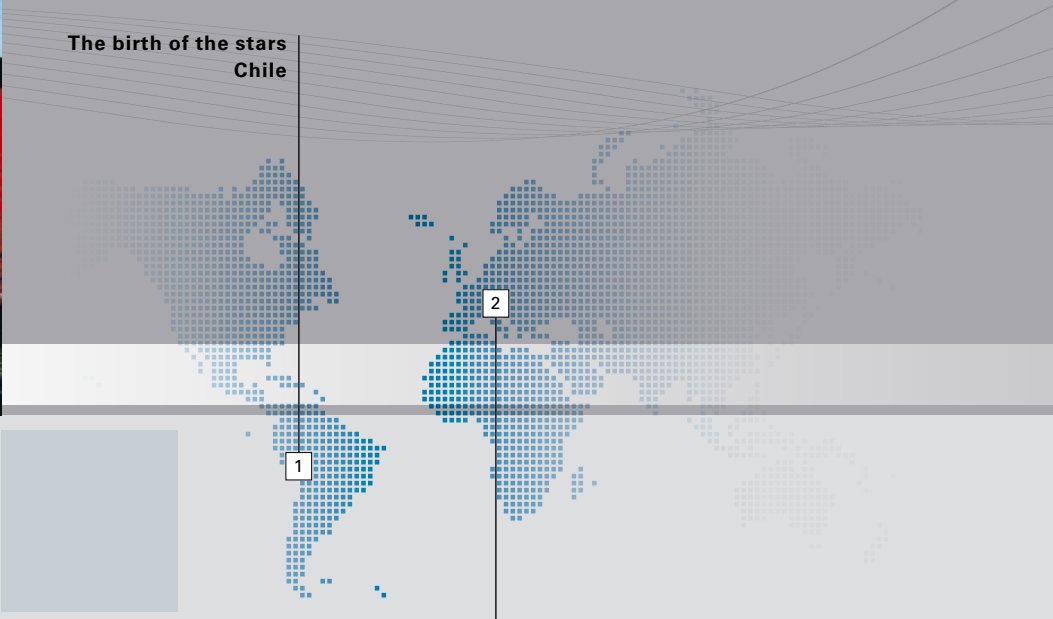


Twelve Max Planck institutes and their international partners are behind the interdisciplinary research network MaxNetAging. This "virtual institute" provides scientists with the means to study the causes, processes and consequences of aging.

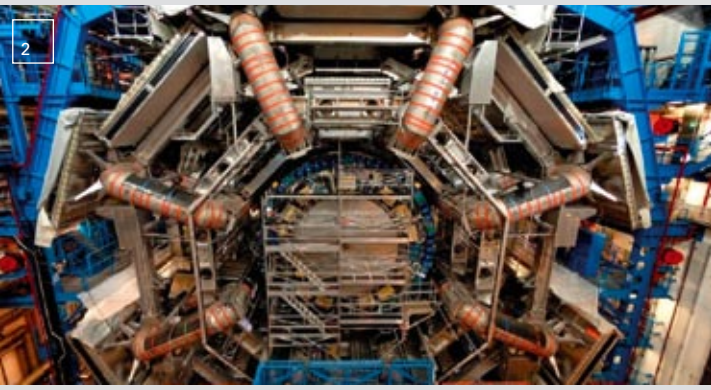
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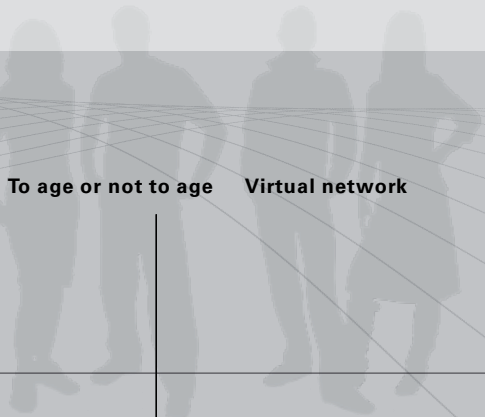
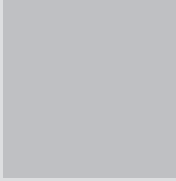
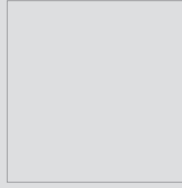
**The birth of the stars
Chile**



**Holding the world together in its inmost folds
Switzerland**



2



To age or not to age Virtual network

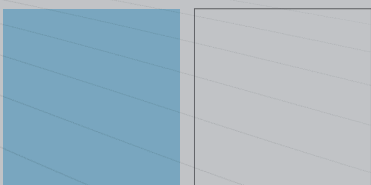
Our institutes undertake cross-border co-operation in order to bring together not only resources but also a diversity of conceptual models and approaches. The resulting synergy is invaluable in facilitating decisive advances in science. Max Planck institutes have maintained contacts with the world's most significant research institutions for decades in pursuit of scientific progress.

International activities of Max Planck institutes

This bilateral and multilateral cooperation takes many forms: from database-supported virtual laboratories via branch institutes in foreign locations to participation in major international projects requiring costly technological facilities. Max Planck institutes are at present cooperating with around 6,000 partners located in 120 different countries across the globe.

Over half of our cooperation partners are located in the European Union. Through their extremely successful involvement in EU projects supported by the European Research Framework programs, the Max Planck institutes are making a substantial contribution towards realizing the goal of a European Research Area as targeted by scientific and economic policy.

Beyond the borders of Europe, Max Planck institutes are also participating in major international projects of crucial importance, including the World Climate Research Program (WCRP) and the International Geosphere-Biosphere Program (IGBP).



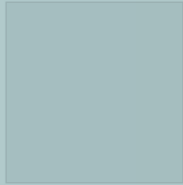
Scientific organizations in Europe, the USA and Asia in particular are consistently expanding their international activities. Research clusters of the highest standard are being developed in prominent locations. By working in close harmony with one another, multiple institutes researching complementary topics in the same location are able to substantially increase the level of added scientific value, to the benefit of all.

International presence

Because both its research efforts and unique structure enjoy an exceptional international reputation, the Max Planck Society is a highly sought-after collaborative partner in joint institutional undertakings. By maintaining a high international profile, the Max Planck Society for its part profits from the dynamic growth in the world's scientific centers both old and new, and is thereby able to specifically enhance its own research spectrum.

The Max Planck Society has four institutes outside of Germany, three of which can already look back on a long tradition of achievement. In future we shall continue to target regions of the world that either possess effective and efficient research systems or exhibit appropriate development potential, with a view to establishing further new institutes. Such a commitment by the Max Planck Society is always conditional upon the unimpaired application of its principles of governance and institutional autonomy, as well as a guarantee by the host country of long-term financial planning security.

In a new approach, the Max Planck Society will set up international Max Planck Centers. Such Centers are structurally consolidated joint research undertakings established jointly with partner organizations abroad and represent milestones in successful bilateral cooperation.



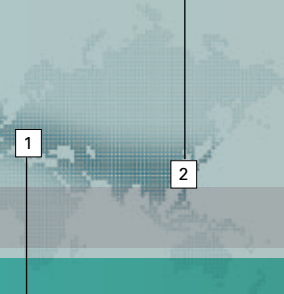
The alliance between the Art History Institute in Florence and the long-established Bibliotheca Hertziana in Rome under the umbrella of the Max Planck Society has created an international center for research into Italian culture that is without parallel. ▼



**Kunsthistorisches
Institut
in
Florenz**

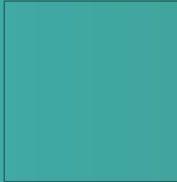
**In the footsteps of artists
and master builders | Italy**

**The mathematics of
biomolecules | China**



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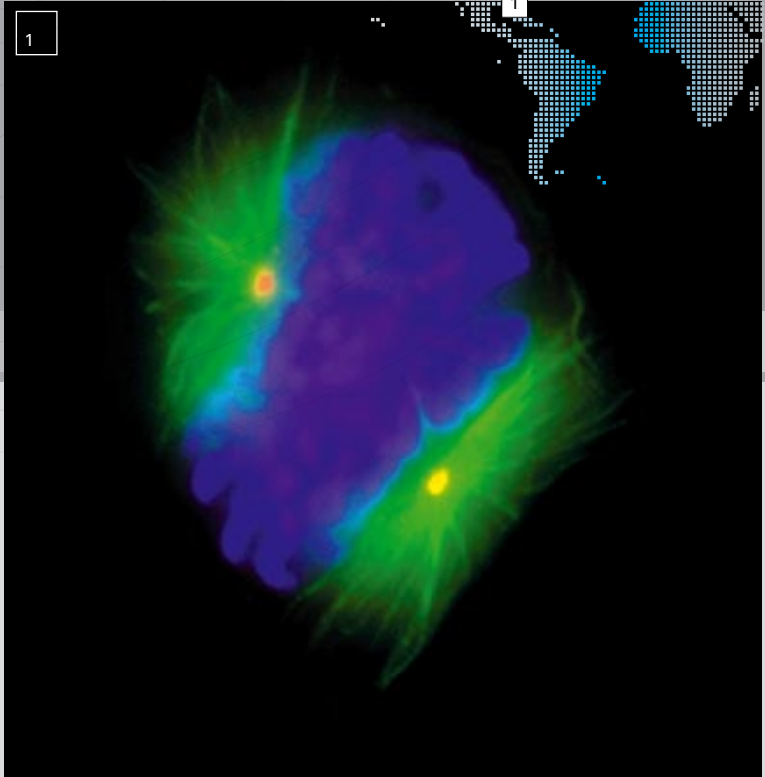
The mathematics of biomolecules | China

In 2005, the Chinese Academy of Sciences (CAS) and the Max Planck Society established a joint Institute. The CAS-MPG Partner Institute for Computational Biology on the campus of the Shanghai Institute for Biological Sciences (SIBS) operates at the interface between theoretical and experimental molecular biology. ▶

中国科学院上海生命科学研究院计算生物学研究所
(中国科学院 - 马普学会计算生物学伙伴研究所)



Images of the building blocks of life | USA



The first Max Planck Institute outside of Germany financed entirely with US funds is now taking shape in Florida. The Max Planck Florida Institute will investigate molecular imaging processes, of which these two illustrations are examples. Together with the Scripps Florida Research Institute and the Florida Atlantic University, a scientific center of international standing is being established in the field of biosciences. ▲

Of human language | Netherlands

The Max Planck Institute for Psycholinguistics in Nijmegen, founded in 1980, is devoted to an interdisciplinary study of the basic principles of human language. The Institute also maintains the world's largest archive of languages that are at risk of dying out. Our photo shows Directors Wolfgang Klein, Steven Levinson, Anne Cutler and Peter Hagoort, pictured with the busts of famous predecessors in their field (left to right: C & W. Stern, E. Sapri, W. Wundt, P. Broca, C. Wernicke). ▼





Research in a global context

National borders are too restrictive to support the level of productive effort needed to address the highly complex scientific challenges of the present and future. Above all, new areas of study that have yet to become established can only achieve the necessary “critical mass” within the framework of international cooperation. Even the most successful clusters tend to focus regional competence on already established subjects. At the cutting edge of research, more than anywhere else, the search for knowledge is proving to be a global process.

The Max Planck Society, as a German research organization, is part of the global scientific community. Its international activities are an expression of the knowledge and value creation process that constitutes its central mandate: to engage in research of the highest quality.



▲ The Administrative Headquarters building of the Max Planck Society in Munich

Imprint

Published by

Max-Planck-Gesellschaft zur Förderung der Wissenschaften e.V.

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Text

www.ruth-dieckmann.de

Design

[www.haak-nakat.de]

Status: March 2010

Photo credits:

Page 5 fold-out section, outside, top: CAS-MPG Partner Institute for Computational Biology | Page 5 fold-out section, inside, top: MPI for Informatics / Stanford University | Page 5 fold-out section, inside, bottom: Shanghai Institute for Biological Sciences, Chinese Academy of Sciences | Page 7: Archimedes | Page 8 fold-out section, outside, top: ESO/WFI, MPIfR/ESO/APEX (A. Weiß et al.; NASA/CXC/CfA (R. Kraft et al.)) | Page 8 fold-out section, outside, bottom: CERN | Page 8 fold-out section, inside, top: APEX – Andreas Lundgren | Page 8 fold-out section, inside, bottom: CERN | Page 11 top: Istituto Nazionale per la Grafica, Rome