

Comments from around the world:

Princeton Plasma Physics Laboratory and the entire U.S. collaboration team are extremely excited to see the initial field line mapping results from the Wendelstein 7-X device. We applaud the IPP team and Max Planck Institute for this very beautiful and important step towards plasma operations. This is a major accomplishment that demonstrates the viability of the basic design and functioning of Wendelstein 7-X. We look forward to continuing to work with our German colleagues on this intriguing scientific experiment and to its coming important research contributions to fusion energy.

Dr. David A. Gates, Stellarator Physics Leader, Princeton Plasma Physics Laboratory, USA

Congratulations to all the people involved. This is indeed a very important milestone for the implementation of the European Fusion Roadmap.

Prof. Dr. Francesco Romanelli, former Leader of the European Fusion Development Agreement

Great news! Having followed Wendelstein 7-X since the start of the project nearly 20 years ago, having seen the great difficulties it was in some 10-12 years ago, and reading about today's success, I can testify that you did the right thing: never give-up, learn about difficulties and find ways. Bravo to all!

Prof. Dr. Jérôme Paméla, Director of Agence ITER France, Cadarache, France

It is with great pleasure that myself and my colleagues at CRPP Lausanne receive the news about the first tests of Wendelstein 7-X at full field. These very impressive technical achievements open the way to an imminent experimentation in the most advanced stellarator facility in the world. A very promising alternative to tokamaks, and at the same time a very exciting cutting edge science experiment that will benefit the entire plasma physics and fusion community. We look forward to seeing and indeed, participating to, the first plasma experiments in this wonderful machine. Our warmest congratulations go to our friends and colleagues of IPP!

Prof. Dr. Ambrogio F. Fasoli, Director, Centre de Recherches en Physique des Plasmas, Ecole Polytechnique Fédérale de Lausanne, Switzerland

Congratulations to you and the IPP team on this monumental achievement. It bodes very well for a rich and productive programme in the coming years and represents a great leap forward for the international stellarator program. My colleagues and I are excitedly looking forward to first plasma and to collaborations with your team into the future.

Prof. John Howard, Director of the Australian Plasma Fusion Research Facility, Head of the Plasma Research Laboratory at Australian National University, Canberra, Australia

Astonishing results from Wendelstein 7-X – exquisite pictures of the magnetic field's "flux surfaces". Complex physics and precision engineering combining for remarkable results.

Prof. Steven Cowley, Director, Culham Centre for Fusion Energy, Abingdon, United Kingdom

The best strategy to succeed in science should be based in our capability to explain how nature works in a transparent way making difficult things understandable. The first measurements of magnetic surfaces in the Wendelstein 7-X show, with fully convincing experimental results, the closeness between the real and the designed magnetic structure validating the assembly of the

entire device. This is key achievement of the Wendelstein 7-X team and a great milestone for the whole fusion community.

Prof. Carlos Hidalgo, Head of Experimental Physics Division, Fusion National Laboratory, CIEMAT, Spain

The Wendelstein 7-X stellarator is a crucial step in the sixty-year quest for fusion energy through the magnetic confinement of hot plasmas. The shape of the Wendelstein 7-X plasma was chosen to control plasma phenomena that have impeded the achievement of practical fusion systems. No other experiment exists that can carry out integrated studies of the robust plasma control that may be required for practical fusion energy. The demonstration that Wendelstein 7-X can be operated at its full magnetic field with the field lines lying in the required surfaces implies that these studies can now be performed.

Prof. Dr. Allen H. Boozer, Professor of Applied Physics, Columbia University, USA

Ich gratuliere! Die Flussflächenfotos sind fantastisch!

Prof. Matthew R. Stoneking, Lawrence University, Appleton, Wisconsin, USA

The successful first operation of the complex Wendelstein 7-X magnet coils and vacuum systems is a major technical milestone for which the entire MPI-IPP team must be congratulated. The fusion research community is highly anticipating first plasma and physics studies at Wendelstein 7-X. Its result will be transformational towards our understanding of transport, stability and boundary plasmas in stellarators, and bring us closer to producing intrinsically steady-state, high fusion performance plasmas.

Prof. Dennis G. Whyte, Director, Plasma Science and Fusion Center, Massachusetts Institute of Technology, USA

Wendelstein 7-X is the most innovative fusion confinement experiment ever constructed. The team has achieved a great technical accomplishment in bringing the magnetic field system up and into full operation. The electron beam mapping has confirmed that the precise structure needed for good plasma confinement has been realized through careful design, fabrication, and assembly. This clears the last major hurdle before plasma operations scheduled to begin soon. Operation will truly be a momentous occasion in fusion research as the first demonstration of the advanced optimized stellarator as a viable candidate for DEMO and fusion energy. We wish to congratulate the IPP Team on a job well done and of the highest significance to fusion research. We look forward to close collaboration with the IPP team – the device offers excellent opportunities for state of the art research and at the same time is a premier environment for students and young researchers.

Prof. David Anderson, Prof. Oliver Schmitz, University of Wisconsin-Madison, USA

What a great step!! Congratulations! Looking forward seeing the real at Fachbeirat soon.

Prof. Dr. Hiroshi Yamada, National Institute of Fusion Science, Toki, Japan

Wonderful news, congratulations to you and the entire Wendelstein 7-X team for the successful demonstration of good flux surfaces. Now lets make a plasma!

Dr. David Maurer, Associate Professor, Auburn University, USA

Congratulations!! I am looking forward to exciting results from Wendelstein 7-X.

Prof. Dr. Harold Weitzner, Professor of Mathematics, New York University, USA