

Press release

August 9th, 2022

PI 2/2022

Federal Research Minister Stark-Watzinger and Minister Martin visit IPP Greifswald

Expansion of the Wendelstein 7-X fusion device completed / Experiments to start in autumn

The Federal Minister of Education and Research, Bettina Stark-Watzinger, visited the Max Planck Institute for Plasma Physics (IPP) in Greifswald today. Together with Bettina Martin, Minister for Science, Culture, Federal and European Affairs of Mecklenburg-Western Pomerania, she attended a reception hosted by the IPP on the occasion of the completion of the upgrading of Wendelstein 7-X



From left in front of Wendelstein 7-X: Bettina Martin, Minister for Science, Culture, Federal and European Affairs of the State of Mecklenburg-Western Pomerania, Prof. Dr. Sibylle Günter, Scientific Director of the Max Planck Institute for Plasma Physics and Bettina Stark-Watzinger, Federal Minister for Education and Research. (Photo: Magnus Schult)

After two successful initial operation phases, the Wendelstein 7-X fusion device has been further expanded. This final step, which upgrades the machine to demonstrate plasma pulses of up to 30 minutes with increased heating power, has now been completed and Wendelstein 7-X is finished. A water-cooled inner cladding and the new

centrepiece, a water-cooled divertor, complete the device. In autumn 2022, Wendelstein 7-X will go back into operation. The scientists will then have a total of 70 measuring systems at their disposal.

"Wendelstein 7-X is an important step on the way to a commercial fusion power plant", emphasized Federal Research Minister Bettina Stark-Watzinger during her visit to IPP. "Fusion is a huge opportunity to make our energy supply sustainable, safe and independent. If the transfer into utilization were to succeed, it would be an innovation of incredible bearing that can contribute enormously to our energy and climate policy", said the Federal Research Minister.

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"The state government of Mecklenburg-Western Pomerania is proud to be home to Wendelstein 7-X, the world's leading stellarator device", said Bettina Martin, Minister of Science in Mecklenburg-Western Pomerania. "Sustainable energy is the future topic of the 21st century. Especially in times when the question of future energy production is becoming more and more important, it is essential that research on sustainable and clean energy sources is carried out in international cooperation. With Wendelstein 7-X, research at the Mecklenburg-Western Pomerania research location is being conducted at the highest international level on sustainable solutions for our energy needs of the future."

Prof. Dr. Sibylle Günter, Scientific Director of the IPP, welcomed Federal Minister Bettina Stark-Watzinger and State Minister Bettina Martin as well as numerous other guests from federal and state politics, industry and science to the Max Planck Institute for Plasma Physics in Greifswald. "Wendelstein 7-X already is the most powerful stellarator worldwide. The now completed expansion gives us the opportunity to further increase the performance parameters important for a fusion power plant and to demonstrate that stellarators can operate reliably in continuous operation," said Prof. Dr. Sibylle Günter.

The goal of fusion research is to develop a climate and environmentally friendly power plant. Similar to the sun, it is supposed to derive energy from fusion of atomic nuclei. To ignite the fusion fire, the fuel – a hydrogen plasma – must be confined by magnetic fields and heated to temperatures above 100 million degrees. The task of Wendelstein 7-X, the world's largest stellarator fusion device, is to investigate the suitability of such devices for power plants. Wendelstein 7-X is to demonstrate the great advantage of stellarators, namely the capability of continuous operation.

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