Abstract Submitted
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First Results and Future Plans on HIDRA DANIEL ANDRUCZYK, ZEHUAN SONG, NIRBHAV CHOPRA, DANIEL JOHNSON, ANDREW SHONE, DAVID RUZIC, JEAN PAUL ALLAIN, DAVIDE CURRELI, University of Illinois, HIDRA TEAM — The former WEGA stellarator, which operated in Greifswald at the Max Planck Institute for Plasma Physics, has been resurrected as the Hybrid Illinois Device for Research and Applications (HIDRA) at the University of Illinois. HIDRA is a five period, l =2, m =5 stellarator with major radius R_0 =0.72 m and minor radius r =0.19 m. Initial heating is with 2.45 GHz ECR heating at B_0 =0.087 T magnetic field and can be operated up to B_0 =0.5 T. It has the ability to operate as both a stellarator and tokamak, mainly operating as a stellarator for long pulse studies. Expected parameters as a stellarator are Te=25 eV and ne=1x10^{18} m^{-3} and as a tokamak Te and ne can be up to 800 eV and 1x10^{19} m^{-3} respectively. Research is dedicated to PMI studies using the wealth of knowledge and experience at the Center for Plasma Material Interactions. First experiments have started to be performed in HIDRA and soon it will become an integral step in the development of flowing lithium PFC concepts that will be implemented on EAST. This presentation will discuss the assembly of HIDRA along with first results from initial experiments and planned future experiments.

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