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Review of single effect experiments for the National LM PFC Program[1] DANIEL ANDRUCZYK, University of Illinois at Urbana-Champaign, RABEL RIZKALLAH, DANIEL O'DEA, DAVIDE CURRELI, University of Illinois Urbana-Champaign, RAJESH MAINGI, Princeton Plasma Physics Laboratory, CHUCK KESSEL, Oak Ridge National Laboratory, SERGEY SMOLENTSEV, University of California Los Angeles, PFC DESIGN TEAM TEAM — In 2019 the DOE tasked PPPL, ORNL UIUC and UCLA to begin a National LM PFC program tasked with designing a flowing liquid metal divertor system for future fusion reactors. This was a follow on from the FESS LM PFC evaluation study led by Kessel *et al.,* [Fusion Sci. Tech. 75 (2019) 886]. Part of supporting the design effort, UIUC is performing single effect experiments on liquid lithium material compatibility (wetting, dryout, corrosion), flow characteristics of different concepts (fast, medium, slow, LiMIT, FLiLi, CPS) and vapor shielding (seeded environment, modeling). Though, initially not directly part of the national program, recent results performed on EAST at ASIPP in China with a LiMIT type limiter has been giving insight into PFC design. In July of this year vapor shielding experiments will be performed on MAGNUM-PSI at DIFFER. This presentation will give a brief overview of some of the results obtained so far and also will talk about future measurements that will take place in HIDRA and a new facility in Illinois, MEME, to support the ongoing design efforts.
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Daniel Andruczyk
University of Illinois at Urbana-Champaign

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