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Total X-Ray Power Improvement on Recent Wire Array Experiments on the Z Machine[1] MICHAEL JONES, DAVE AMPLEFORD, MIKE CUNEO, CHRIS JENNINGS, BRENT JONES, MIKE LOPEZ, GREG ROCHAU, MARK SAVAGE, JOHN PORTER, Sandia National Laboratories — Recent experiments on the refurbished Z-machine were conducted using large diameter stainless steel arrays which produced x-ray powers of 260 TW.[2] Follow-up experiments were then conducted utilizing tungsten wires with approximately the same total mass with the hypothesis that the total x-ray power would increase. On the large diameter tungsten experiments, the x-ray power averaged over 300 TW and the total x-ray energy was greater than 2MJ. Different analysis techniques for inferring the x-ray power will be described in detail.

[1]Sandia National Laboratories is a multi-program laboratory operated by Sandia Corporation, a wholly owned subsidiary of Lockheed Martin company, for the U.S. Department of Energy's National Nuclear Security Administration under contract DE-AC04-94AL85000.
[2]D.J. Ampleford, International Conference on Plasma Science, 2009

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