

Abstract Submitted
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Strength studies on V and Ta-W alloys using Diamond Anvil Cell¹ JAE-HYUN KLEPEIS, HYUNCHAE CYNN, WILLIAM EVANS, ROBERT RUDD, LIN YANG, Lawrence Livermore National Laboratory, HANS-PETER LIERMANN, WENGE YANG, Argonne National Laboratory, CMMD/PLS TEAM, HP-CAT COLLABORATION — The pressure-dependences of the quasi-static yield strength of polycrystalline forms of V and Ta-W alloys have been measured at room temperature using an implementation of a non-hydrostatic diamond anvil cell technique. A new feature of this work is the use of *in situ* determination of the sample thickness and pressure with synchrotron X-ray. We adopt the conventional technique [C. Meade and R. Jeanloz, *J. Geophys. Res.* 93, 3261 (1988)] and the pointwise approach to determine the strength under Tresca yield criterion. The result shows the trend of the pointwise analysis is similar to the one of conventional approach.

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