Abstract Submitted
for the DFD07 Meeting of
The American Physical Society

Explosion in a kitchen sink - a theory of circular hydraulic jump and its gasdynamic analogue ASLAN KASIMOV, Massachusetts Institute of Technology — We propose a theory of a stationary circular hydraulic jump that is based on the shallow water equations and a careful treatment of the far-field boundary conditions. We show that a unique solution for the radius of the hydraulic jump is obtained by matching the jump conditions and the critical flow downstream of the jump. A gasdynamic analogue of the hydraulic jump is pointed out and discussed.

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Date submitted: 03 Aug 2007 Electronic form version 1.4