As an example, take $T=3000$ K and $p_{H_2O}=0.3$ atm. Kung and Center[6] have measured $p_{H_2O}\tau$ as 6×10^{-9} s-atm. Putting in the measured shock tube value from Fig. 1 of $\alpha/p_{H_2O}=3\times10^{-2}$ cm^{-1} atm^{-1}, we find

$$I=10^8\Delta T/T \quad \text{W/cm}^2$$

Thus very intense laser radiation would be required to obtain any appreciable vibrational non-equilibrium. The experiments of Ref. 1 apparently had an intensity of 10^4 W/cm^2, leading to $\Delta T/T=10^{-4}$, and so making nonequilibrium effects very unlikely.

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Errata: "A Comparison of Some Finite Element and Finite Difference Methods for a Simple Sloshing Problem"

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METHOD 3 of this Note is a *finite difference* method, not a finite element method. The variational principle was applied to show one way of deriving the differential equations and boundary conditions, which are then approximated by finite difference equations. The objective is to show that the finite element method generally requires more dependent variables than the finite difference method for fluid, thus requiring more computer time for the same accuracy. Note that the error in the section heading and in the text was introduced without my knowledge. Also Fig. 1 was omitted in error. This figure illustrates an finite element method by Hunt for rectangular domain which is ingeneous and yet inferior to method 3, a finite difference method. Method 3 is superior among second order methods based on truncation error, because of the combination of (extrapolated) central difference boundary conditions with the (central) difference form of the differential equation.

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Errata: "Inviscid Solution for the Secondary Flow in Curved Ducts"

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THERE was a mistake in the right-hand side of Eqs. (7) and (A10). The equations should read:

$$u\frac{\partial v}{\partial r}+\frac{v}{r}\frac{\partial v}{\partial \theta}+w\frac{\partial v}{\partial z}=\Big\{w\Big(u\frac{\partial \xi}{\partial r}+\frac{v}{r}\frac{\partial \xi}{\partial \theta}+w\frac{\partial \xi}{\partial z}\Big)$$

$$+\Big[u\Big(\frac{\partial v}{\partial r}-\frac{v}{r}\Big)-v\frac{\partial u}{\partial r}\Big]\zeta+w\xi\Big(\frac{\partial u}{\partial r}+\frac{\partial w}{\partial z}\Big)$$

$$+w\Big(\frac{1}{r}\frac{\partial w}{\partial \theta}-\frac{\partial v}{\partial z}\Big)\Big(\frac{v}{r}-\frac{\partial v}{\partial r}\Big)+v\Big[\frac{\xi}{r}\frac{\partial w}{\partial \theta}$$

$$+\frac{\partial w}{\partial r}\Big(\frac{1}{r}\frac{\partial w}{\partial \theta}-\frac{\partial v}{\partial z}\Big)-u\frac{\partial \zeta}{\partial r}-\frac{v}{r}\frac{\partial \zeta}{\partial \theta}-w\frac{\partial \zeta}{\partial z}\Big]\Big\}\Big/\zeta$$

where

$$\zeta=\frac{\partial v}{\partial r}+\frac{v}{r}-\frac{1}{r}\frac{\partial u}{\partial \theta}$$

The error in Eqs. (7) and (A10) of our paper is purely a transcription error. The equation provided above is the equation actually used in the analysis and the results of the analysis are valid. The error resulted from trying to simplify the right-hand side of the equation for the purpose of publication only and was not used in the actual solution.

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