Abstract Submitted
for the DFD14 Meeting of
The American Physical Society

**Ahmad Reza Estakhr Number, (Fluid Dynamics)** AHMAD REZA ESTAKHR, Physics Research Center — The Estakhr Number is a dimensionless number defined as: $E_n = \frac{\lambda}{\eta}$ where $\lambda$ denotes mean free path and $\eta$ denotes Kolmogorov length scale. The Mach and Estakhr Numbers are therefore related by: $E_n = Ma\sqrt{\frac{\gamma\pi}{2}}$ where the $Ma$ denotes Mach number, $\gamma$ denotes the ratio of specific heats and is dimension less. At high Reynolds number the Knudsen, Estakhr and Reynolds Numbers are therefore related by: $E_n = K_n R_e$ where the $K_n$ denotes Knudsen number and $R_e$ denotes Reynolds number.

Ahmad Reza Estakhr
Physics Research Center

Date submitted: 27 Jun 2014 Electronic form version 1.4