The world of non-linear physics around us

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A soap film is an ideal medium of modelling the two-dimensional flow. When a point source of heat is applied to a vertically placed soap film, thermal convection similar to the one observed in stratified fluid in the atmosphere is visualized by the deformation of color stripes. Rotating spherical soap film reveals deflection of flow due to the Coriolis force. Some other fluid flows reflecting non-linear physics are shown using this medium.

身近な実験でみる非線形物理の世界
―シャボン玉対流―

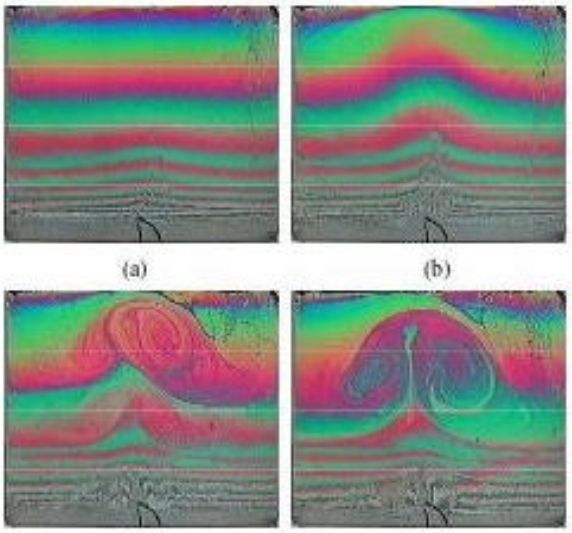

図１．鉛直に立てた石けん膜上の熱対流

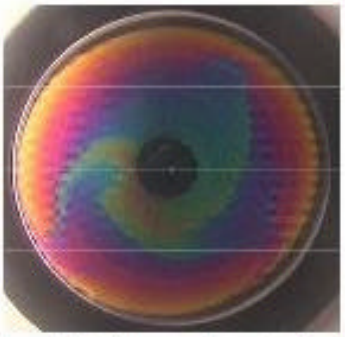

図２．回転するシャボン玉の上の流