1. Record Nr. UNINA9910144606103321 Autore Zeytounian Radyadour Kh Titolo Topics in Hyposonic Flow Theory / / by Radyadour Kh. Zeytounian Berlin, Heidelberg:,: Springer Berlin Heidelberg:,: Imprint: Springer, Pubbl/distr/stampa 2006 9783540316244 **ISBN** 3540316248 Edizione [1st ed. 2006.] Descrizione fisica 1 online resource (XVI, 286 p.) Collana Lecture Notes in Physics, , 0075-8450 ; ; 672 Disciplina 532 533.62 Soggetti Fluids Atmospheric science **Environmental sciences** Fluid mechanics Fluid- and Aerodynamics Atmospheric Sciences **Environmental Physics Engineering Fluid Dynamics** Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Bibliographic Level Mode of Issuance: Monograph Nota di contenuto Aero-Thermo-Dynamic, Nonlinear Acoustics and Meteorological Equations -- The Many Faces of Low Mach Number Flows Asymptotics -- A First Approach of Low Mach Number Flows Asymptotics -- Some Aspects of Low Mach Number External Flows -- Some Aspects of Low Mach Number Internal Flows -- Slow Atmospheric Motions as a Low Mach Number Flow -- Miscellaneous: Various Low Mach Number Fluid

Problems and Motions.

Sommario/riassunto

Hyposonic fluid flows, characterized by a low Mach number, are mainly linked with geophysical and environmental fluid flows. In addition they are relevant to engineers because of their connection with aerodynamics. The book brings together insights derived from mathematically rigorous results and combines them with a number of realistic fluid flow situations. Asymptotic analytic solutions for the low-

Mach number cases are developed to provide both insights into the underlying physics as well as benchmarks for numerical computations.