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## PREFACE

This special course proceedings offer a review of the major investigation tools used in hypersonic research. It aims to provide to engineers and researchers a critical view on the experimental facilities and CFD models used in aerospace research for aerothermodynamic studies related to database issue. Their simulation capabilities are addressed together with the range of operation in which they could be considered. The course notes focus as well on the research axis dealing with reference test cases and validation in hypersonic. It gives perspectives on the needs for development of experimental facilities and flow diagnostics as well as modelling efforts.

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