CONTENTS

FUSION PLASMA PHYSICS

•	Interpretation and control of helical perturbations in tokamaks	1
•	Statistical physics for anomalous transport in plasmas	6
•	The anomalous transport in turbulent plasmas	10
•	Simulation of the VUV spectra from the reverse field pinch	21
•	Investigation of discrepancies in the Zeff measurements made at JET	27

UNDERLYING TECHNOLOGY

•	Investigation of the properties of optical fibers (in the UV spectral region)	
and	optoelectronic components operating in radiation fields of fusion installations	30
•	Development of Chemical Deposition Methods for the Fabrication of YBCO High	
Ter	Temperature Superconducting Coated Conductors for High-Field Applications	
•	Development of unreacted NbAl multifilamentary strands for fabrication of Nb ₃ Al	
sup	superconducting conductors for high-field applications	
•	Studies on tritium permeation into various materials as a function of gas composition,	
par	partial pressure and temperature	

TECHNOLOGY TASKS

• Development of theoretical tools and their use to calculate cross sections			
relevant to the EAF and EFF files			
• Non-destructives analysis of fusion materials samples by microtomography	66		
• Calculation of Deuterium-Lithium cross sections for energies up to 50 MeV			
using realistic nucleon-nucleon interactions			
• Joining development: Production of brazing alloys and joints for irradiation	82		
• UV transmission for large diameter optical fibres	88		
Publications in scientific journals	92		
<u>Contributions to conferences and workshops</u> <u>Reports</u> <u>List of mobilities to the Euratom Associations</u>			
		Contact information	