1. Introduction

The Association EURATOM-IPPLM was founded on January 1st, 2005, as a result of the concerted effort and co-operation of the:

Polish Minister of Education and Science and his representatives,
President of the Polish National Atomic Energy Agency and his representatives,
Director and staff of the Institute of Plasma Physics and Laser Microfusion,
Principal officers and staff of the Association Research Unit,
Officers of the Commission of the European Communities,
Officers and field coordinators of the EU fusion programme, and, last but not least,
all scientists and technicians actively engaged in Polish fusion R&D.

The Association herewith presents the Annual Report for the first year of its activity. The Association puts special emphasis on the efficient co-operation of all relevant research groups at Polish research institutes and universities, and on effective collaborations with other EURATOM Associations.

The Association contributes to a wide range of activities in the fusion programme, but its principal areas of expertise are those related to the following physics topics:

- Numerical plasma modelling (core, edge and SOL transport, transient phenomena like ELM's, ITER operating regimes, DEMO performance);
- Development of plasma diagnostics, in particular soft X-ray spectrometry and fast particles (ions, electrons, neutrons) diagnostics;
- Electromagnetic and structural analysis;
- PFCs erosion and re-deposition;
- IFE "keep-in-touch" activity.

In 2005, contributions to the Fusion Physics Programme were oriented towards numerical codes and development of new plasma diagnostics. There is a major collaboration with many EURATOM Associations, which have experimental facilities on which diagnostics can be tested and employed. The Association contributes to the ITM and PWI EU Task Forces as well as to the JET Task Forces D, E and T.

Underlying Technology focused on development of new materials (W-Cu functionally graded composites) and plasma-wall interaction studies (removal of fuel and co-deposits).

The Association contributed to the EFDA Technology Workprogramme in the fields "Magnetic Structure and Integration" (Characterization of high temperature superconducting materials for ITER magnets) and "Tritium Breeding and Materials" (Neutronic calculations for ITER and IFMIF).

On the national level we organized two Information Days, one for the research institutions, the other one for industry. Meetings of the Association Steering Committee took place on 16th March and 5th December in Warsaw. As a partner within the European Fusion Research Programme, we strongly supported the efforts of the European Commission towards a decision on the ITER site in Cadarache, France.

Integration of the Polish R&D and industrial potential with the EURATOM Fusion programme is a great challenge. We hope to meet this challenge successfully which, however, will only be possible with continuing co-operation of the individuals and institutions who have kindly supported us from the very beginning.

Andrzej Gałkowski
Head of Research Unit

1.1. General Information

Association EURATOM-IPPLM, Head of Research Unit

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Association Steering Committee

European Commission	Poland
Yvan Capouet Head, Unit J6, "Fusion Association Agreements", DG Research	**Jacek T. Gierliński** Director, Ministry of Education and Science
Barry Green Scientific Officer, Unit J6, "Fusion Association Agreements", DG Research	**Zygmunt Składanowski** Director, IPPLM
Walter van Hattum Financial Officer, Unit J7, "Finance and Administration", DG Research	**Stanisław Szpilowski** Director, Polish National Atomic Energy

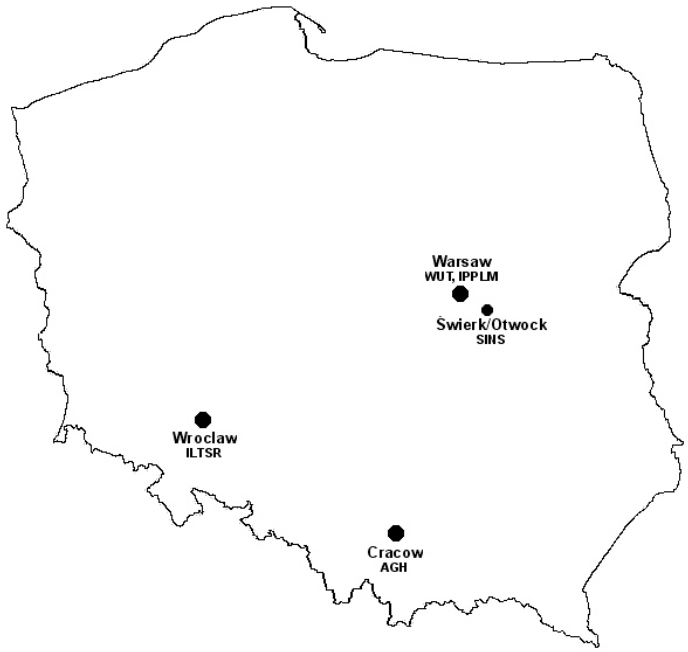

Figure 1.1 Research Unit in Poland

Research Unit in Poland

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1.2. Financial Information

		Expenditure (Euro)
General Support		**942,428**
	Physics	596,083
	Inertial Confinement Fusion	177,231
	Underlying Technology	169,114
EFDA		**83,036**
	Basic Support Technology	79,778
	Preferential Support Technology	(0,000)
	JET Secondments	3,258
Mobility		**52,080**
TOTAL		**1077,544**

Table 1.1 Expenditures for 2005

1.3. Statistics

The work programme of the Association EURATOM-IPPLM includes 16 R&D tasks on physics, underlying technology, technology and inertial confinement fusion. Table 1.2 contains information about tasks distribution.

Table 1.2 Tasks distribution for Association Euratom-IPPLM (2005)

	IPPLM	**SINS**	**WUT**	**AGH**	**ILTSR**	
Physics	4	2	2	-	-	**8**
Technology	-	-	-	2	1	**3**
Underlying Technology	1	-	1	-	-	**2**
Inertial Confinement Fusion	3	-	-	-	-	**3**

Distribution of tasks by institution is also shown in the Figure 1.2.

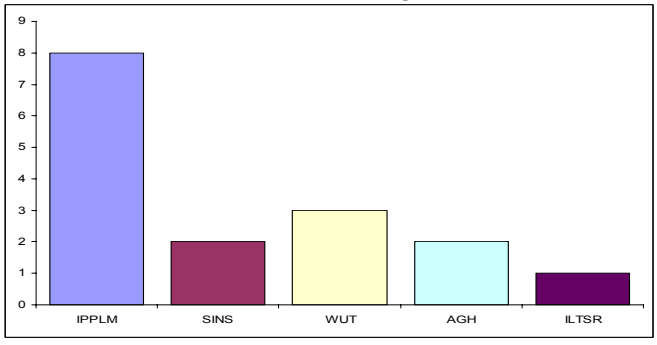

Figure 1.2 Number of tasks for year 2005 by institution

Manpower in 2005 is shown in the Table 1.3 below.

Table 1.3 Association EURATOM-IPPLM staff in 2005

	professional	non professional	TOTAL
IPPLM	27	12	39
SINS	9	5	14
WUT	22	2	24
AGH	4	-	4
ILTSR	5	2	7
	67	**21**	**88**

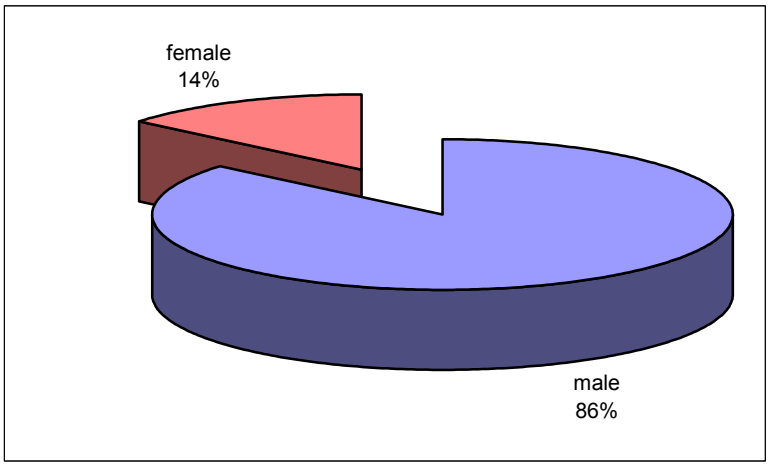

Figure 1.4 Association EURATOM-IPPLM staff in 2005 by gender

The following part of the Annual Report contains information of a preliminary and/or tentative nature and must not be quoted in publications nor listed in abstract journals.
It is the executive summary of the full annual report, summarizing activities performed by the Association EURATOM-IPPLM in 2005.