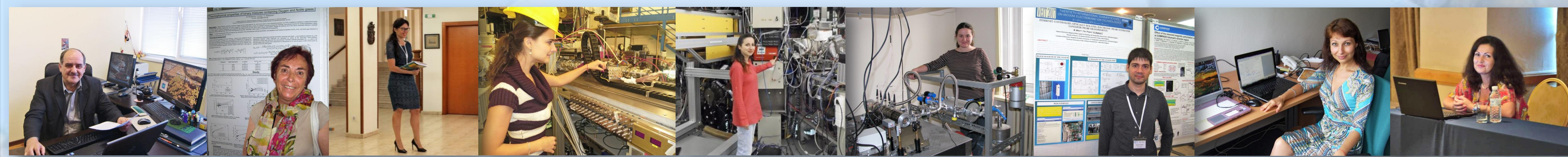
55 години ИНСТИТУТ ПО ЕЛЕКТРОНИКА „Акад. Емил Джаков“

Лаборатория „Физика и техника на плазмата“



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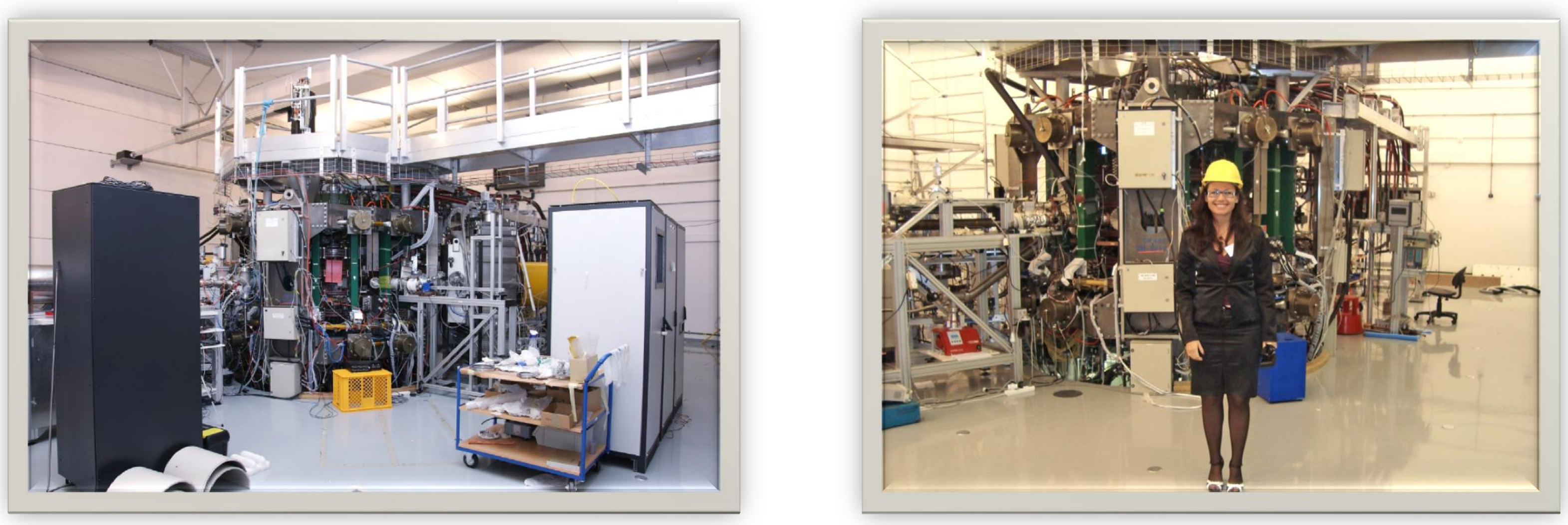
PLASMA PHYSICS AND DIAGNOSTICS OF FUSION PLASMAS

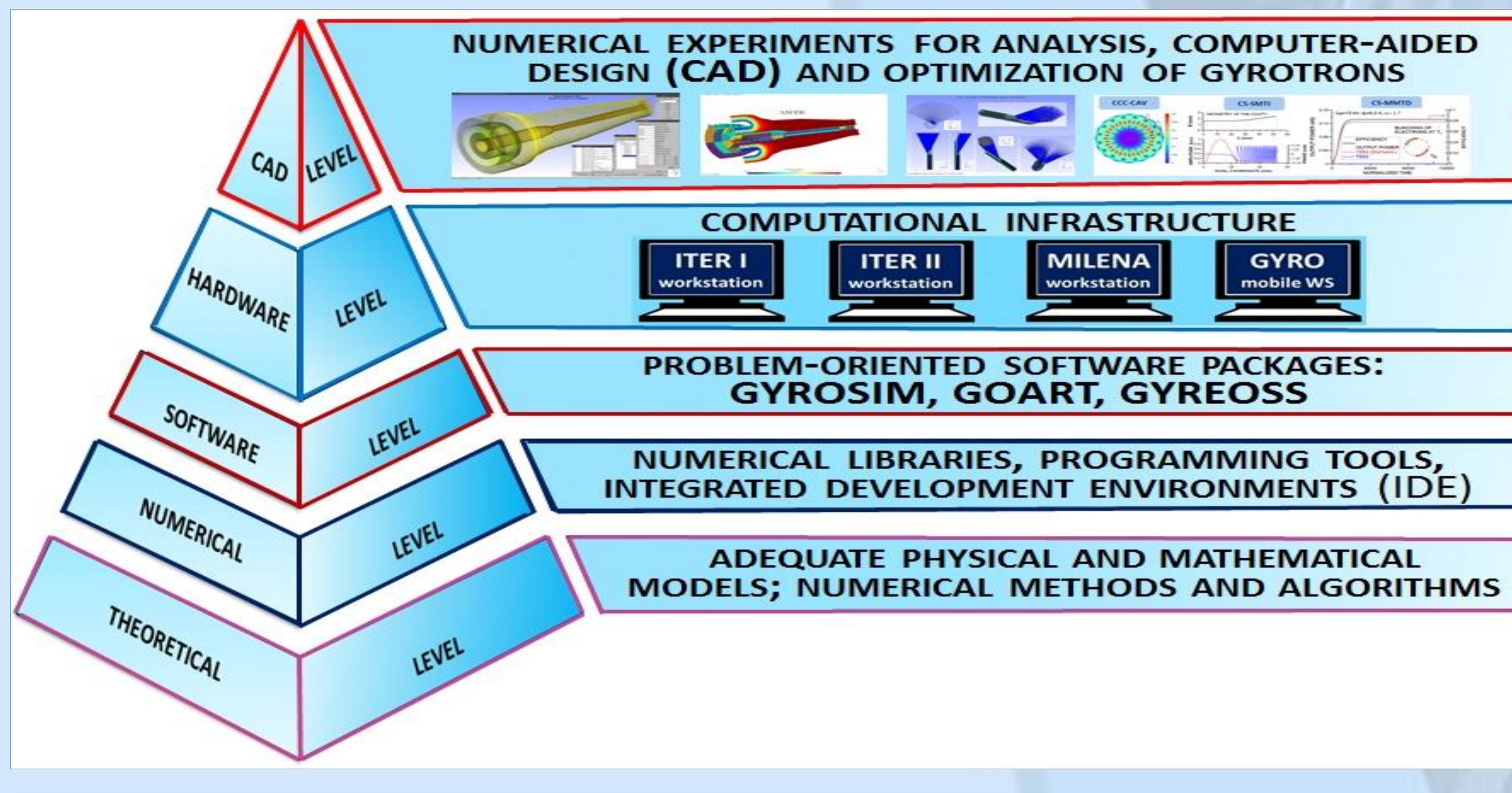
IPP INSTITUTE OF PLASMA PHYSICS OF THE CZECH ACADEMY OF SCIENCES

COMPASS INSTITUTE OF PLASMA PHYSICS ASCR

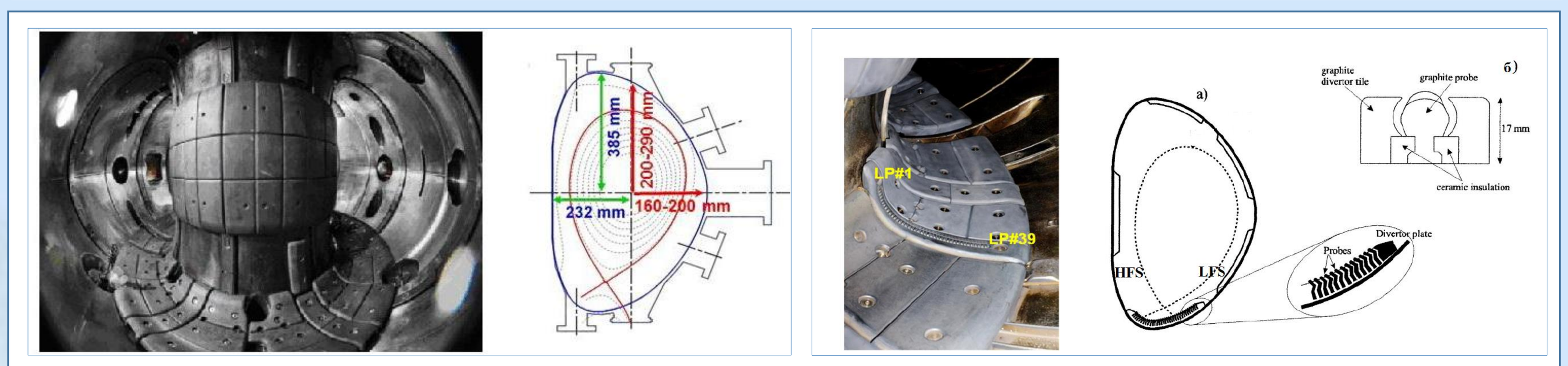
ИНСТИТУТ ПО ЕЛЕКТРОНИКА БЪЛГ.АКАДЕМИЯ НА НАУКИТЕ



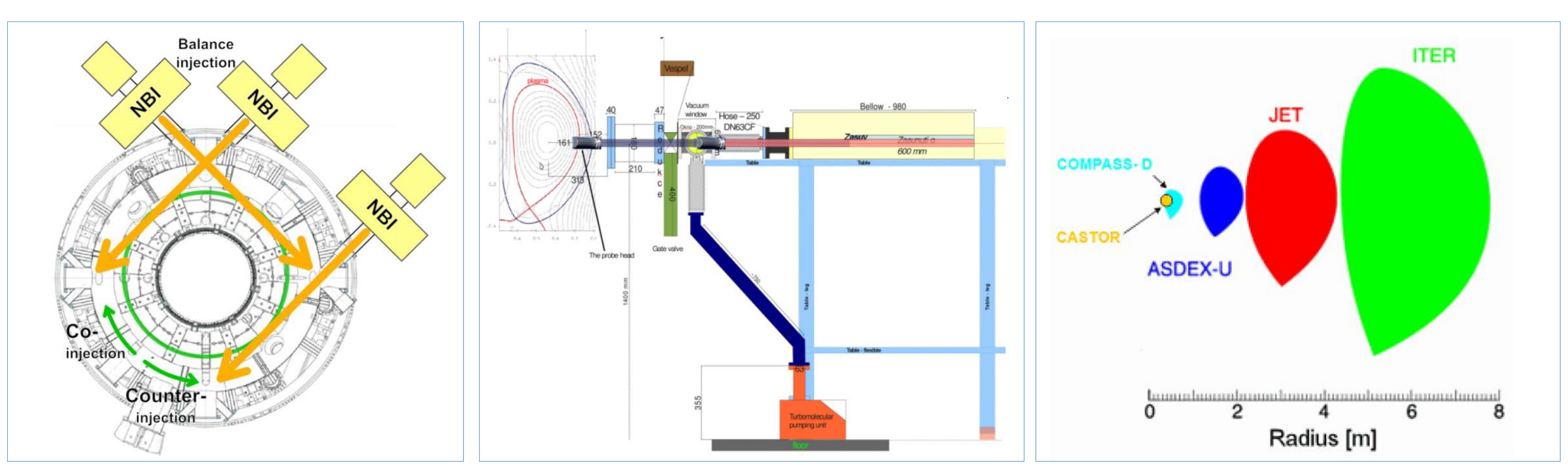
HIERARCHY OF THE TOOLS FOR MODELLING AND SIMULATIONS OF GYROTRONS AT IE-BAS



PROBE DIAGNOSTICS OF EDGE PLASMA IN COMPASS TOKAMAK



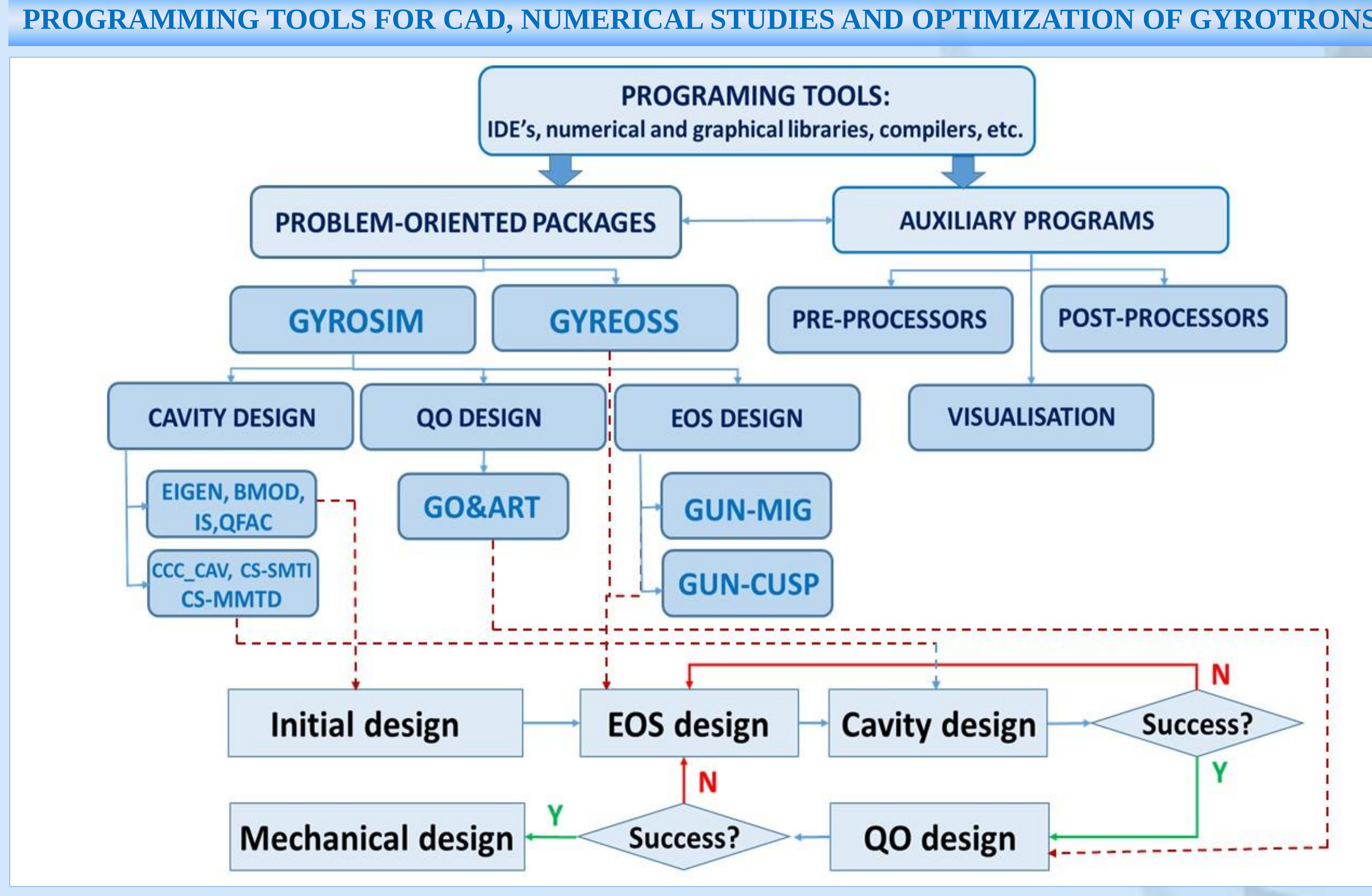
DIVERTOR'S PROBE SYSTEM ON COMPASS TOKAMAK



NEUTRAL BEAM INJECTION SYSTEM FOR ADDITIONAL PLASMA HEATING

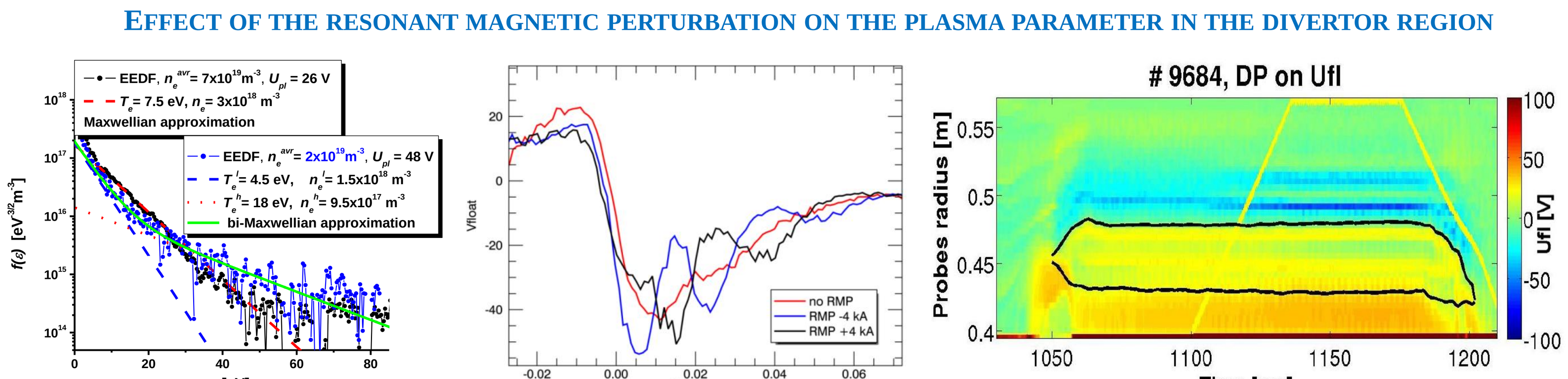
HORIZONTAL RECIPROCATING PROBE MANIPULATOR

PROGRAMMING TOOLS FOR CAD, NUMERICAL STUDIES AND OPTIMIZATION OF GYROTRONS



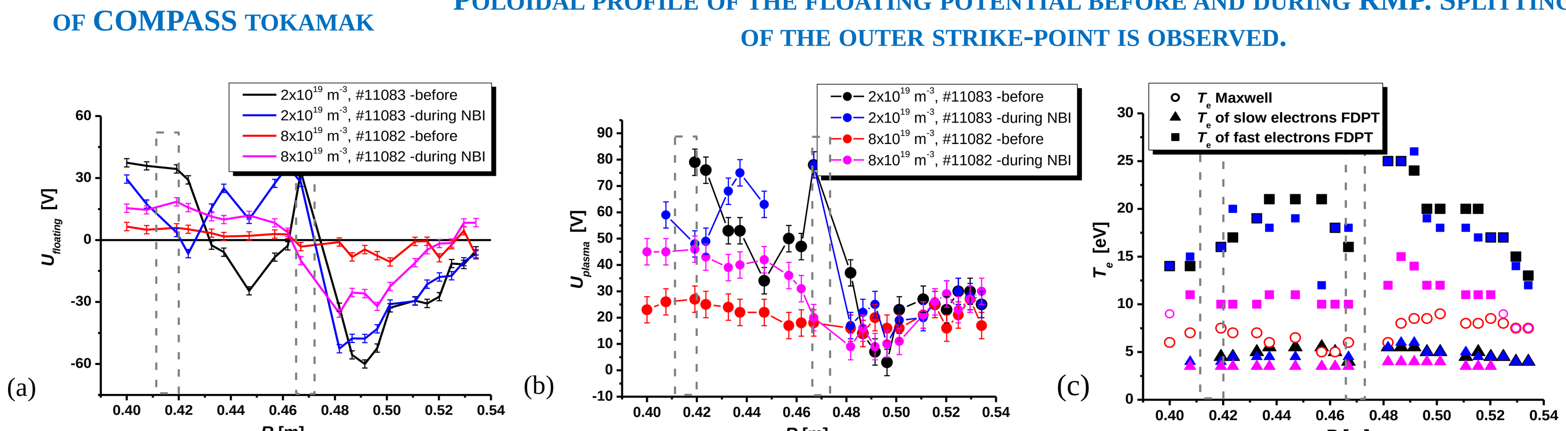
PROBE DIAGNOSTICS OF EDGE PLASMA IN COMPASS TOKAMAK

EFFECT OF THE RESONANT MAGNETIC PERTURBATION ON THE PLASMA PARAMETER IN THE DIVERTOR REGION



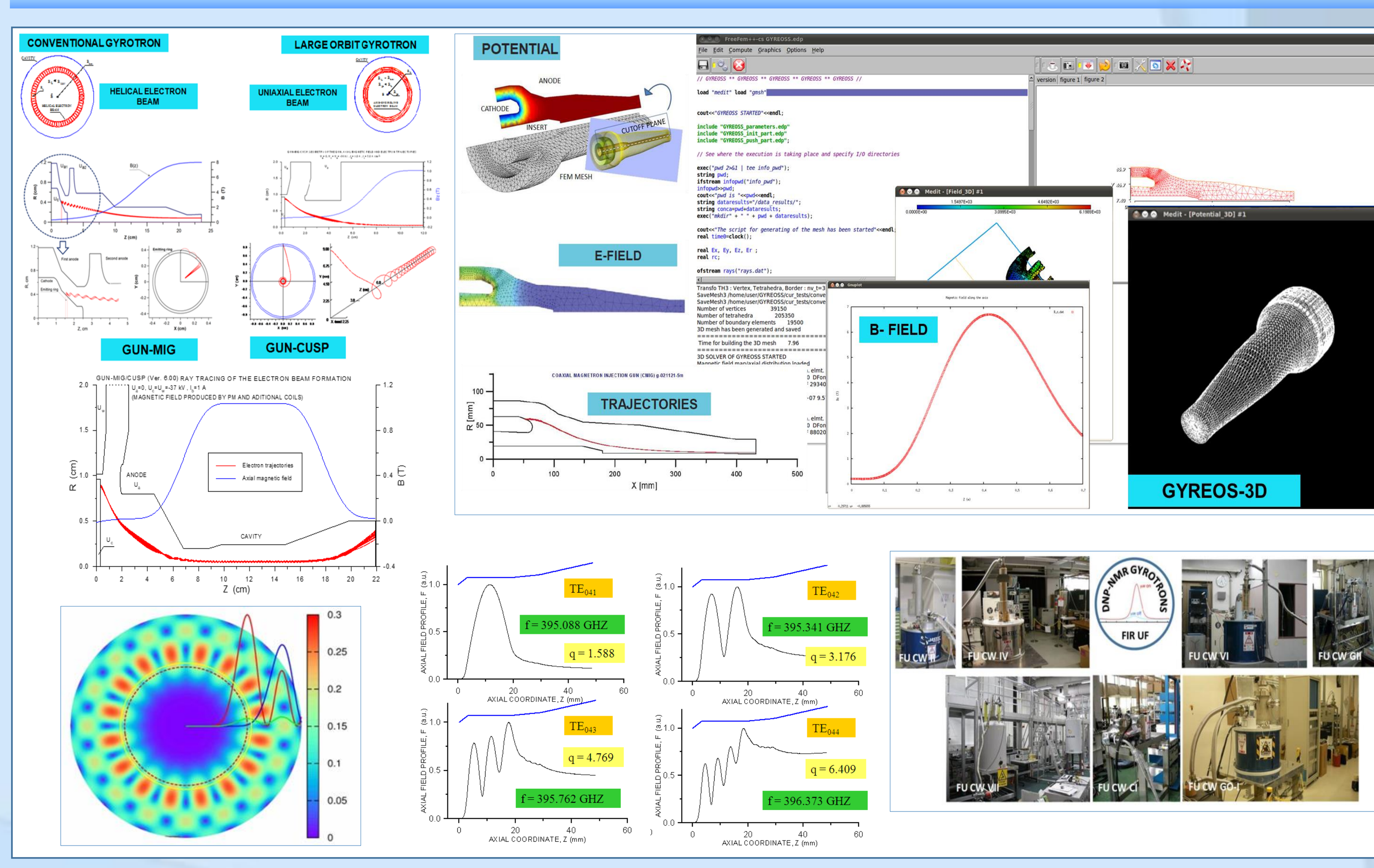
EEDF IN THE DIVERTOR REGION OF COMPASS TOKAMAK

POLOIDAL PROFILE OF THE FLOATING POTENTIAL BEFORE AND DURING RMP. SPLITTING OF THE OUTER STRIKE-POINT IS OBSERVED.

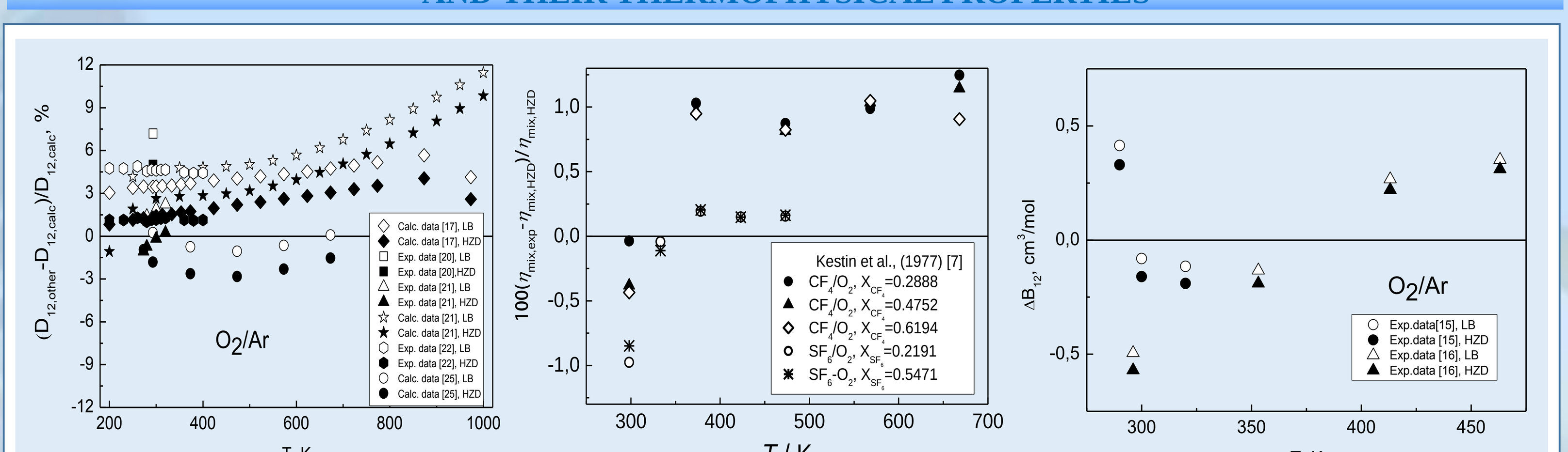


POLOIDAL PROFILE IN THE A) FLOATING POTENTIAL, B) PLASMA POTENTIAL AND C) THE ELECTRON TEMPERATURES AT ADDITIONAL HEATING BY NEUTRAL BEAM INJECTION

DEVELOPMENT, APPLICATIONS AND NUMERICAL STUDIES OF GYROTRONS



INVESTIGATION OF THE INTERMOLECULAR INTERACTION IN GASSES AND BINARY MIXTURES AND THEIR THERMOPHYSICAL PROPERTIES



These studies are based on the fundamental ideas of the late Professors B. Stefanov and L. Zarkova from our Laboratory and involve the use of a modified (n-6) Lennard-Jones potential with temperature dependent parameters for studying the thermophysical properties of dilute gases consisting of molecules with both spherical and linear symmetry. Over the recent years, these ideas have been elaborated and extended further in order to apply them to various binary mixtures of gases important for industrial applications e.g in CVD cameras for etching and cleaning, magnetron sputtering etc., as well as for medical applications – as respiratory gases, tissue regeneration, and instruments sterilization. The transport (diffusion coefficient and viscosity) and equilibrium (second virial coefficient) properties of CF_4/ O_2; SF_6/ O_2; Ar/ O_2; Kr/ O_2, and Xe/ O_2 are calculated.

BROAD INTERNATIONAL COLLABORATION AND ACTIVE PARTICIPATION IN THE INTERNATIONAL CONSORTIUM FOR DEVELOPMENT OF HIGH-POWER TERAHERTZ SCIENCE AND TECHNOLOGY