



CEA PARTICIPATION IN TIGHT COLLABORATION WITH FZK

1. INTRODUCTION (G. GRANGET)
 - Feasibility studies CEA activities - Race experimental program concept
 - Status of Race neutronic calculations (oral communication on behalf of L. MANDARD)
 - Instrumentation (on behalf of S. ANDRIAMONJE)
2. PHOTOFISSION (H. SAFA)
3. TARGET DESIGN (A. BERGERON/C. KRAKOWIAK)



FEASIBILITY STUDIES / CEA ACTIVITIES

- Neutron production, target activation : H. SAFA
 - Cooling (target and core) : A. BERGERON
 - Thermomechanic studies : C. KRAKOWIAK
 - Neutronic design : L. MANDARD
 - Experimental program : F. MELLIER
 - Instrumentation : Ch. JAMMES -S. ANDRIAMONJE
- (for ECATS and ADS development)
- Power transient studies : M.-S. CHENAUD-M. VANIER
 - Neutron gamma propagation : (TRADE results at first step)

RACE Experimental program concept (UT and A&M reactors)



1. Neutron source characterization (Zero power) :

Different detectors :

Piccolo Micromegas (under development)

Fission chambers

Foils.

Buffer effect

Source importance :

different source locations

Near critical, -500 pcm, -3000 pcm, -5000 pcm



RACE Experimental program concept (UT and A&M reactors)

2. Critical phase (with accelerator off)

Reactivity calibrations (Zero power and at power)

Detector response map to the calibration (MSA/MSM)

Reactivity effects : water holes, reflector, absorbers, fuel

Power transients

3. -500 pcm; -3000 pcm; -5000 pcm :

Comparison MSM results and ADS methods on reactivity effects and transients.