

HIGH HEAT FLUX TECHNICAL ASSESSMENT

MOHAMED A. ABDOU

UCLA

HHFMCD TASK GROUP MEETING

FEBRUARY 23-24, 1984

UCLA

HIGH HEAT FLUX TECHNICAL ASSESSMENT MEETING

UCLA Faculty Center, Sierra Room  
February 23-24, 1984

Thursday, February 23

9:00-9:30	Introductory Remarks	Cohen/Davis
9:30-10:00	Status of High Heat Flux Program	Gauster
10:00-10:30	Status of TPE-II	Easoz
10:30-11:00	Technical Assessment	Abdou
11:00-11:45	Operating Conditions	Ulrickson
11:45-12:00	General Remarks	Milora
12:00-1:00	Lunch	
1:00-2:00	System Integration	Morgan
2:00-3:00	Materials and Processes	Mattas
3:00-3:45	Heat Transfer	Boyd
3:45-4:45	Thermomechanical Response	Watson
4:45-5:30	Discussion	

Friday, February 24

8:30-9:30	Electromagnetic Response	Wolfer
9:30-10:00	Instrumentation and Control	Easoz
10:00-11:30	Survey of Facilities	Gordon
11:30-12:00	Discussion of Technical Assessments	
12:00-1:00	Lunch	
1:00-4:00	Continued Group Discussion and Subgroup Meetings/ Finalize Report	

REPORT STATUS  
(AS OF FEBRUARY 22, 1984)

CHAPTER	LEAD AUTHOR	PAGE ALLOCATION	PRESENT PAGES
EXECUTIVE SUMMARY	ABDOU	8	
INTRODUCTION	ABDOU	2	
I. OPERATING CONDITIONS	ULRICKSON	10	
II. SYSTEM INTEGRATION	MORGAN	20	> 40
III. MATERIALS & PROCESSES	MATTAS	20	34
IV. HEAT TRANSFER	BOYD	15	60
V. THERMOMECHANICAL RESPONSE	WATSON	15	22
VI. ELECTROMAGNETIC RESPONSE	WOLFER	10	15
VII. SURVEY OF FACILITIES	GORDON	10	5
VIII. INSTRUMENTATION & CONTROL	EASOZ	10	22

IDENTIFYING AND CHARACTERIZING  
CRITICAL ISSUES AND R&D NEEDS

- AN IMPORTANT PART OF THE TECHNICAL ASSESSMENT IS TO IDENTIFY AND CHARACTERIZE THE TECHNICAL ISSUES.
- THE LIST OF CRITICAL ISSUES MUST BE LIMITED (~10 OR LESS).
- THIS LIST WILL BE MADE VISIBLE IN THE EXECUTIVE SUMMARY.

ACTION ITEM

- EACH SUBGROUP CHAIRMAN DEVELOPS FOR HIS AREA A SUMMARY OF:
  - 1) CRITICAL/KEY ISSUES
  - 2) R&D NEEDS.
- GUIDELINES:
  - LIMIT THE NUMBER OF ISSUES TO THE MINIMUM (~5 FOR EACH AREA; MAYBE ONLY 1 OR 2 FOR SOME; IN EXTREME CASES, E.G., MATERIALS, 6 OR 7).
  - STATE THE ISSUE FOLLOWED BY A BRIEF DESCRIPTION OF THE ISSUE, WHY IT IS IMPORTANT, AND THE CONDITIONS UNDER WHICH IT BECOMES MORE SEVERE OR BECOMES LESS IMPORTANT.
  - DO THE SAME FOR R&D NEEDS.
  - CONSULT WITH YOUR GROUP (VIA PHONE OR TELEFAX).
- DEADLINE:
  - MAIL TO M. ABDOU BY MARCH 16 (TELEFAX OR FEDERAL EXPRESS).

RESPONSIBILITIES FOR SUMMARY OF  
CRITICAL ISSUES AND R&D NEEDS

AREA	PERSON	PAGE LIMIT	No. OF ISSUES LIMIT	No. OF R&D NEEDS LIMIT
SYSTEM INTEGRATION	MORGAN	2	5	5
MATERIALS AND PROCESSES	MATTAS	3	7	7
HEAT TRANSFER	BOYD	1	2	4
THERMOMECHANICAL	WATSON	2	5	5
ELECTROMAGNETIC	WOLFER	2	3	5
FACILITIES	GORDON	2	5	5
INSTRUMENTATION AND CONTROL	EASOZ	1	2	4

NOTES

- NUMBER OF ISSUES AND R&D NEEDS IS A FACTOR OF 3 LARGER THAN WILL BE USED IN THE EXECUTIVE SUMMARY. ABDU, IN CONSULTATION WITH GROUPS, WILL REDUCE THE NUMBERS BASED ON CONSISTENT CLASSIFICATIONS AND RELATIVE PRIORITY AMONG AREAS.
- FOR FACILITIES, THE ISSUES AND R&D NEEDS ARE AS THEY RELATE TO THE FACILITIES NOT THE HIGH HEAT FLUX COMPONENTS.

## SCHEDULE

PLEASE KEEP DEADLINES!

### ALL MEMBERS:

- COMMENTS AND SUGGESTIONS FOR MODIFICATIONS ON INDIVIDUAL CHAPTERS TO SUBGROUP CHAIRMEN BY MARCH 16

### GROUP CHAIRMEN:

- SUMMARY OF CRITICAL ISSUES AND R&D NEEDS MAILED TO M. ABDOU BY MARCH 16
- FINAL MANUSCRIPTS (CAMERA-READY) MAILED TO M. ABDOU BY APRIL 2

### TYPING/ADMINISTRATIVE DETAILS

- EACH SUBGROUP CHAIRMAN IS RESPONSIBLE FOR GETTING HIS SECTION TYPED CAMERA-READY (WITH HIGH QUALITY, REPRODUCIBLE FIGURES) IN HIS OWN ORGANIZATION
- A TYPING FORMAT (AND SAMPLE) IS PROVIDED. PLEASE ENSURE THAT YOUR SECRETARY FOLLOWS THIS FORMAT.
- CHAPTERS SENT TO M. ABDOU MUST BE CAMERA-READY.
- UCLA WILL BE RESPONSIBLE FOR PRINTING AND DISTRIBUTION OF REPORT.