Plans For ARIES-IFE Study

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ARIES Conference Call

May 17, 2000

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ARIES Integrated IFE Chamber Analysis and Assessment Research -- Goals

- Analyze and asses integrated and self-consistent IFE chamber concepts;
- Identify the design/operation window for each promising concept;
- Identify present data base and need extrapolations for each promising concept;
- Identify high-leverage items for R&D.

Note: the research is **not** aimed at developing a point design.

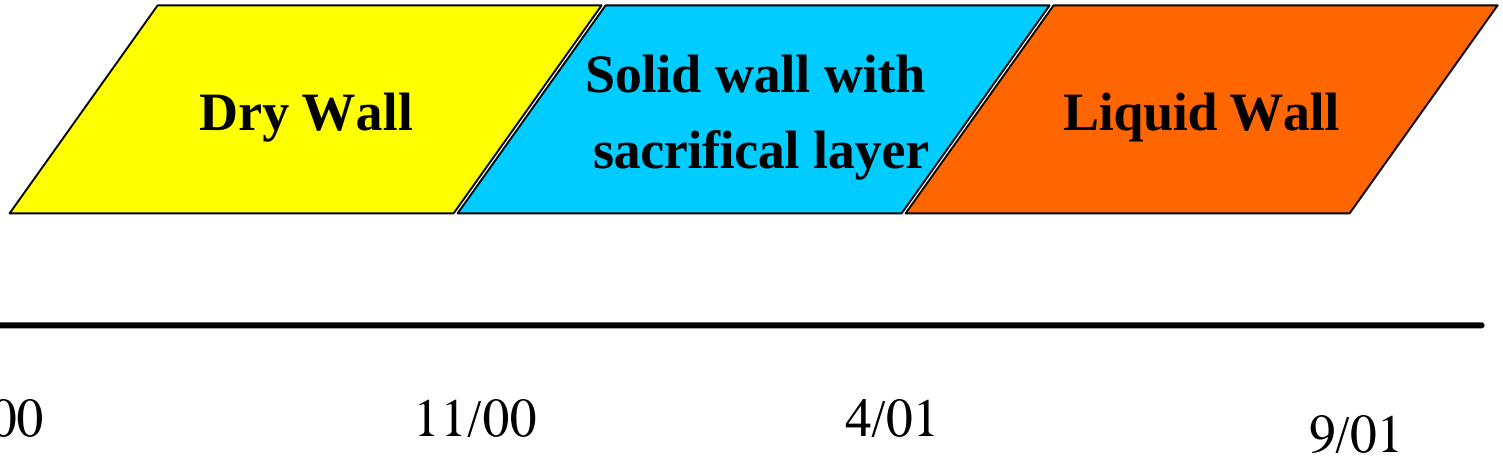
ARIES Integrated IFE Chamber Analysis and Assessment Research -- Goals

- The research is **not** aimed at developing a point design. The goal is to understand trade-offs and identify design windows.
- To guide the R&D, we need to be clear on what are high-leverage R&D items:
  - Not only What data is missing and what are shortcomings of present tools if any?
  - For incomplete database, what is being assumed and why?
  - For incomplete database, what is the acceptable range of data? Would it make a difference to zeroth order, i.e., does it make or break the concept?
- Scientific Credibility is the key.

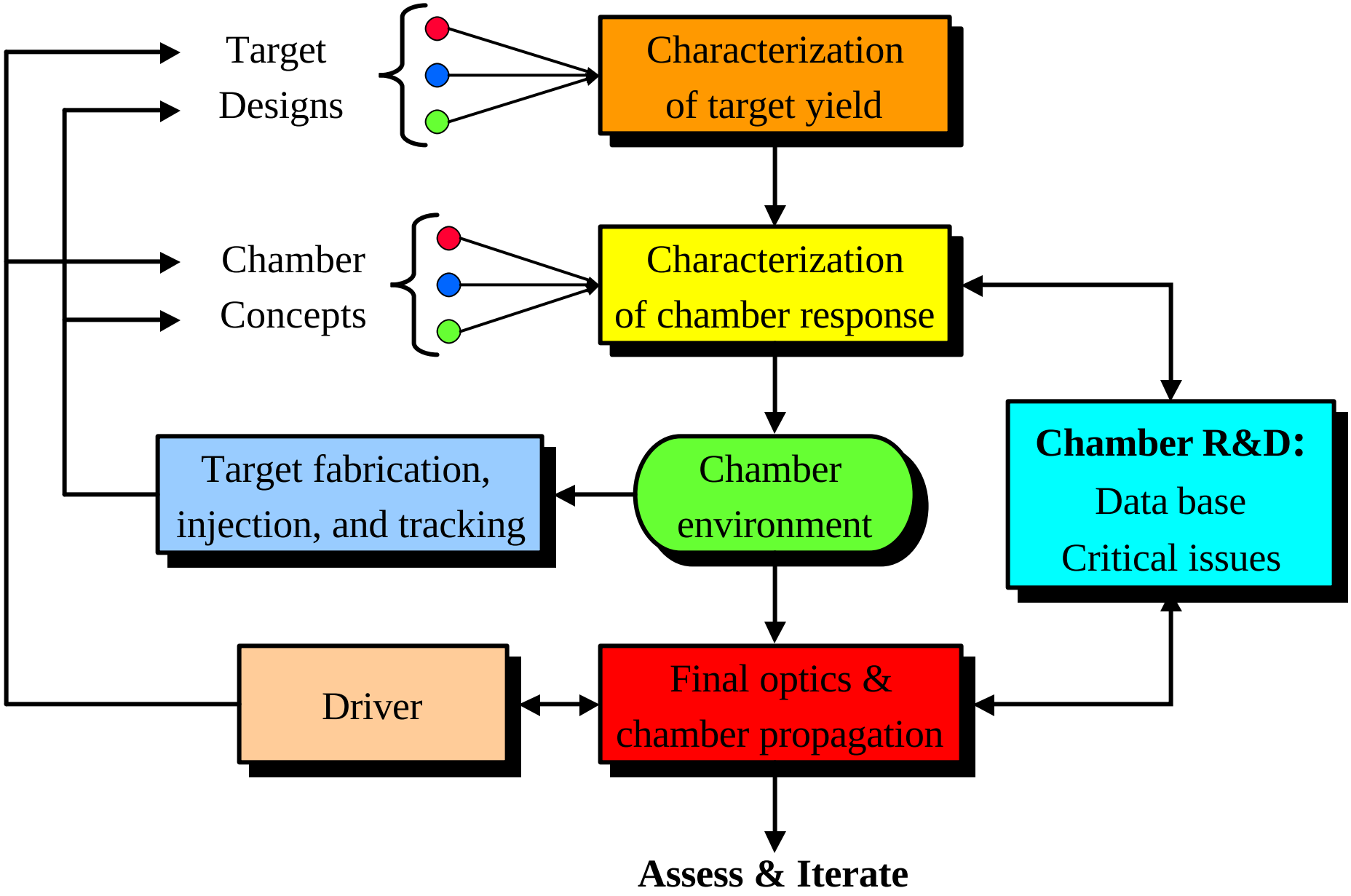
ARIES Integrated IFE Chamber Analysis and Assessment Research -- Approach

- To make progress, we divide the activity based on three classes of chambers:
  - Dry wall chambers;
  - Solid wall chambers protected with a “sacrificial zone” (such liquid films);
  - Thick liquid walls.
- These classes of chambers will be researched in series with the entire team focusing on the task in hand.
- We choose a minimum of two and a maximum of four target designs for analysis. For a start, we choose designs that are already produced in detail. (5 classes of target are identified.)

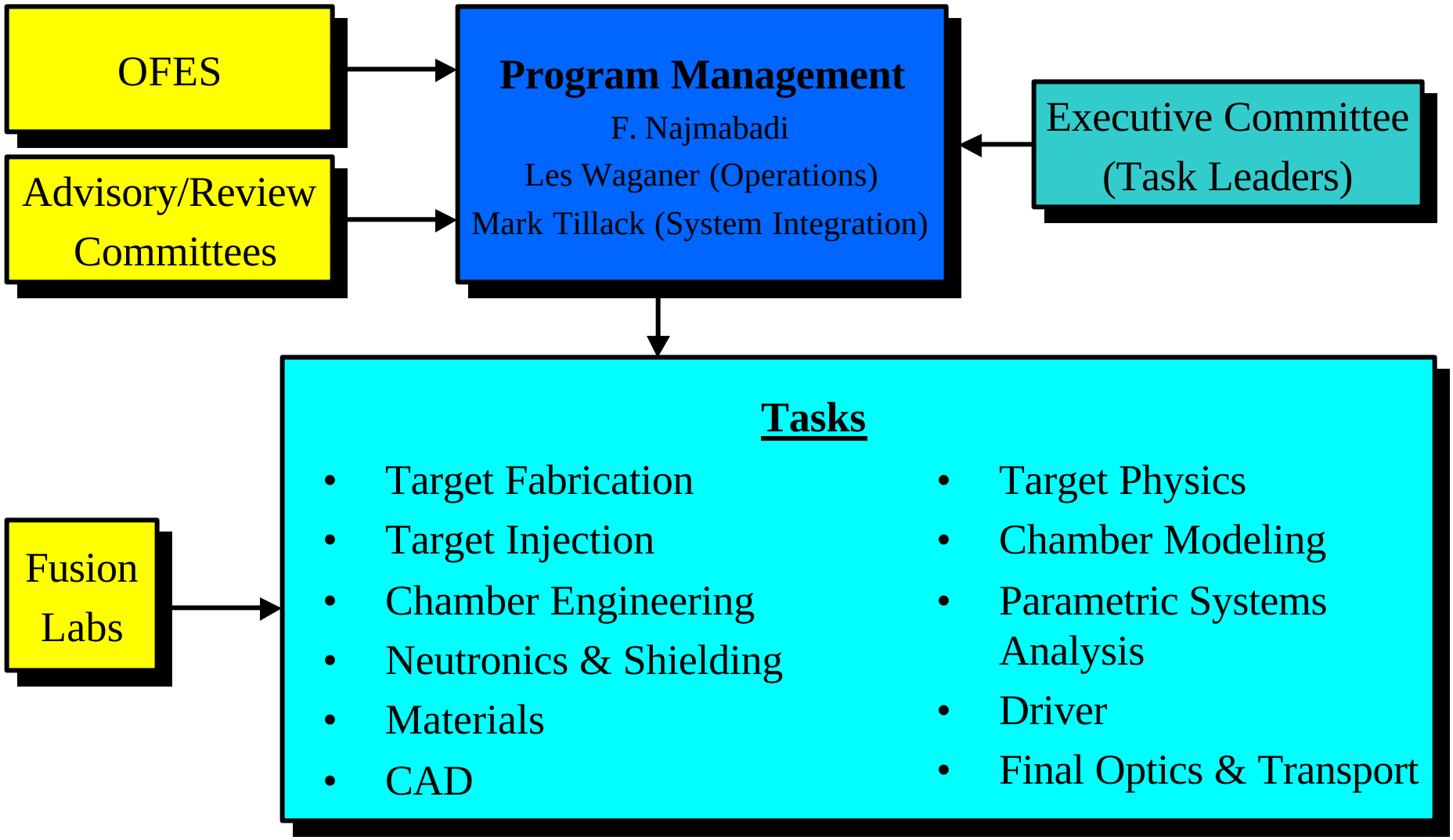
ARIES Integrated IFE Chamber Research: Schedule (Draft 6/00)



An Integrated Assessment Defines the R&D Needs



Program is Organized as a Team



ARIES Integrated IFE Chamber Analysis and Assessment Research –Task Leaders

Target Physics:	NRL*, LLNL*
Chambers (overall leader: Tillack)	
Physics (Peterson?)	UW, UCSD
Engineering (Raffray)	UCSD, UW
Neutronics (El-Guebaly)	UW
Material (Billone)	ANL (Contact with material community)
Safety (Petti)	INEEL, UW, LLNL
Tritium (Sze)	ANL
Chamber Clearing (Tillack)	UCSD, UW
Target fabrication, injection, & tracking (Goodin)	GA, LANL*
Systems: (Miller)	UCSD, LLNL, Boeing
Driver:	
Driver/chamber interface:	UCSD, LLNL*, LLBL*
Driver design	NRL*, LLNL*, LLBL*

* voluntary contributions