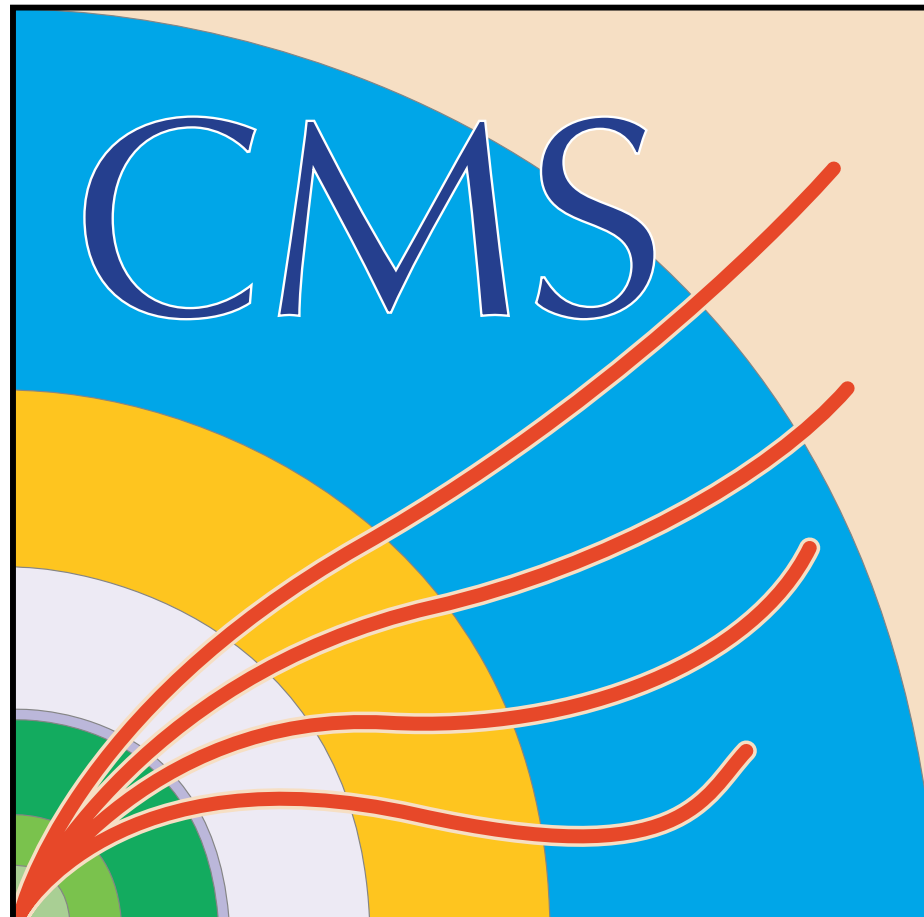
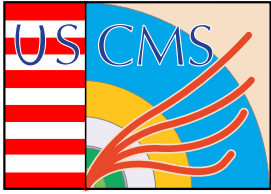


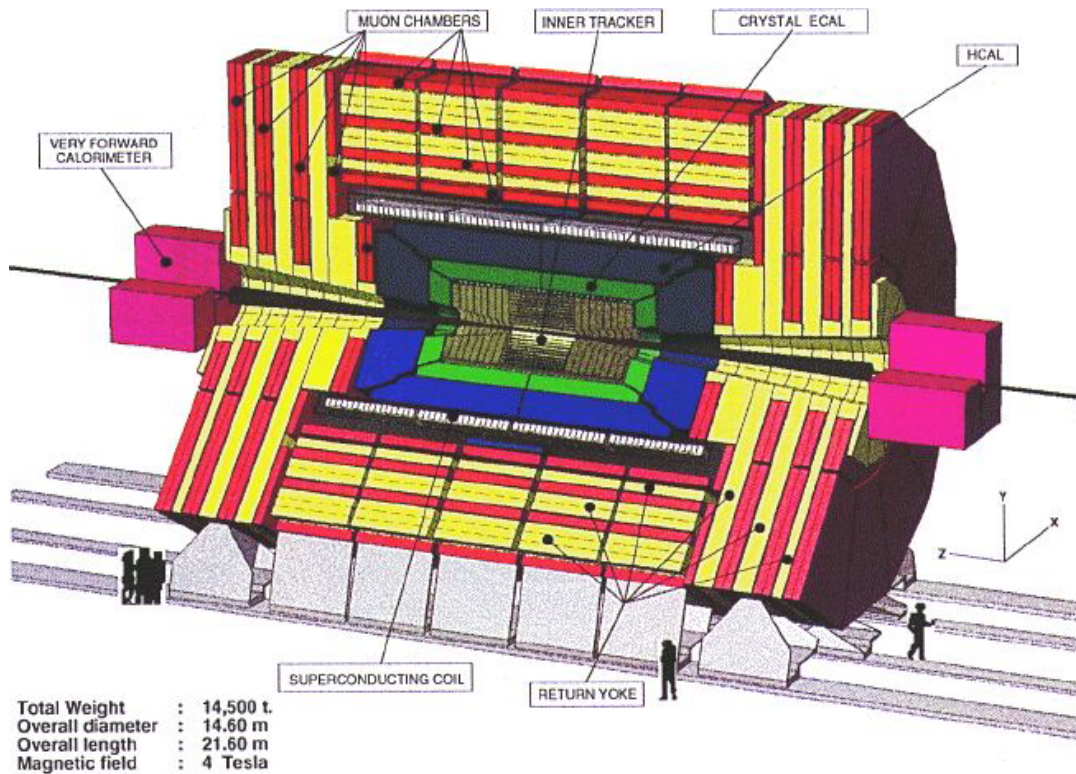
COMPACT MUON SOLENOID

Don D. Reeder
USCMS Spokesman
Chair -- USCMS Collaboration Board





CMS Detector



- 4 T solenoidal field
- muon identification and coverage (EMU)
- missing E_T measurement (HCAL)
- e/γ identification and measurement (ECAL)
- Secondary vertex (E-pixels)
- iron flux return to remeasure muons (Common)

PHYSICS GOAL - to study new particles and interactions.
(Higgs, SUSY, ????) signals: leptons, jets, missing energy)



Institutions in Sub-systems

HCAL

Boston
Fairfield
Fermilab
Illinois(Chicago)
Iowa
Iowa State
Maryland
Minnesota
Mississippi
Nebraska
(Lincoln)
Notre Dame
Purdue
Rochester
Texas Tech

Tridas

UC Davis
UCLA
Fermilab
Iowa
Iowa State
MIT
Mississippi
Nebraska
Northeastern
Ohio State
Wisconsin

Software

UC Davis
UCLA
UC Riverside
UC San Diego
Caltech
Carnegie Mellon
Fermilab
Florida
Florida State (SCRI)
Johns Hopkins
Maryland
Northeastern
Rice
Wisconsin

Tracking

UC Davis
Fermilab
Florida State
(SCRI)
Johns Hopkins
Mississippi
Northwestern
Purdue
Rice
Texas Tech

ECAL

Caltech
Fermilab
Northeastern
Minnesota
Princeton



US CMS Collaboration

~300 Members from 34 Institutions

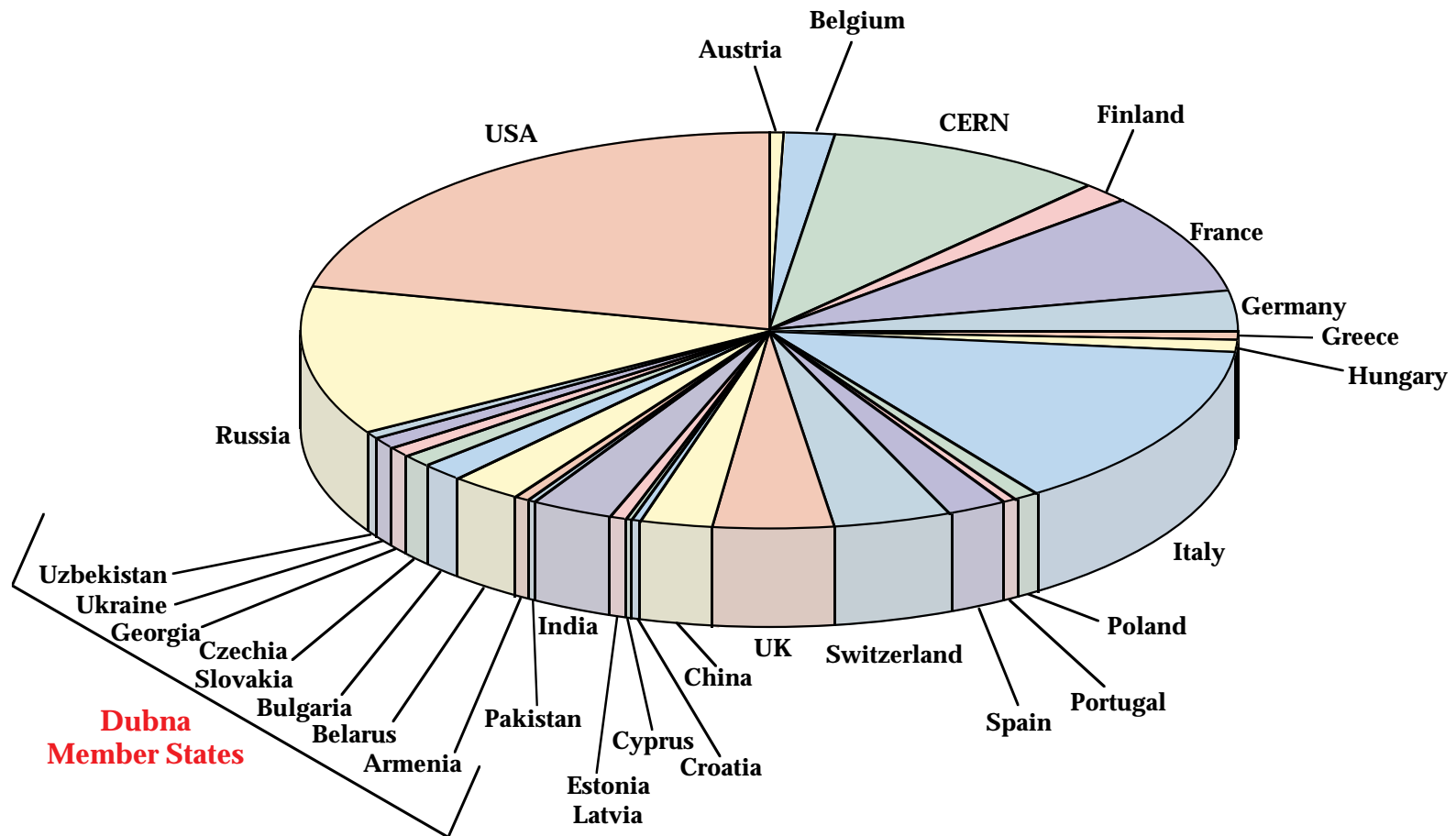
University of Alabama
Boston University
Brookhaven National Laboratory
University of California, Davis
University of California, Riverside
University of California, San Diego
California Institute of Technology
Carnegie Mellon University
Fairfield University
Fermi National Accelerator Laboratory
University of Florida
Florida State University
Florida State University (SCRI)
University of Illinois at Chicago
University of Iowa
Iowa State University
Johns Hopkins University

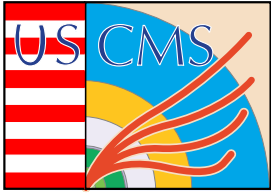
University of Maryland
Massachusetts Institute of Technology
University of Minnesota
University of Mississippi
University of Nebraska
Northeastern University
Northwestern University
University of Notre Dame
Ohio State University
Princeton University
Purdue University
Rice University
University of Rochester
Rutgers University
University of Texas at Dallas
Texas Tech University
University of Wisconsin



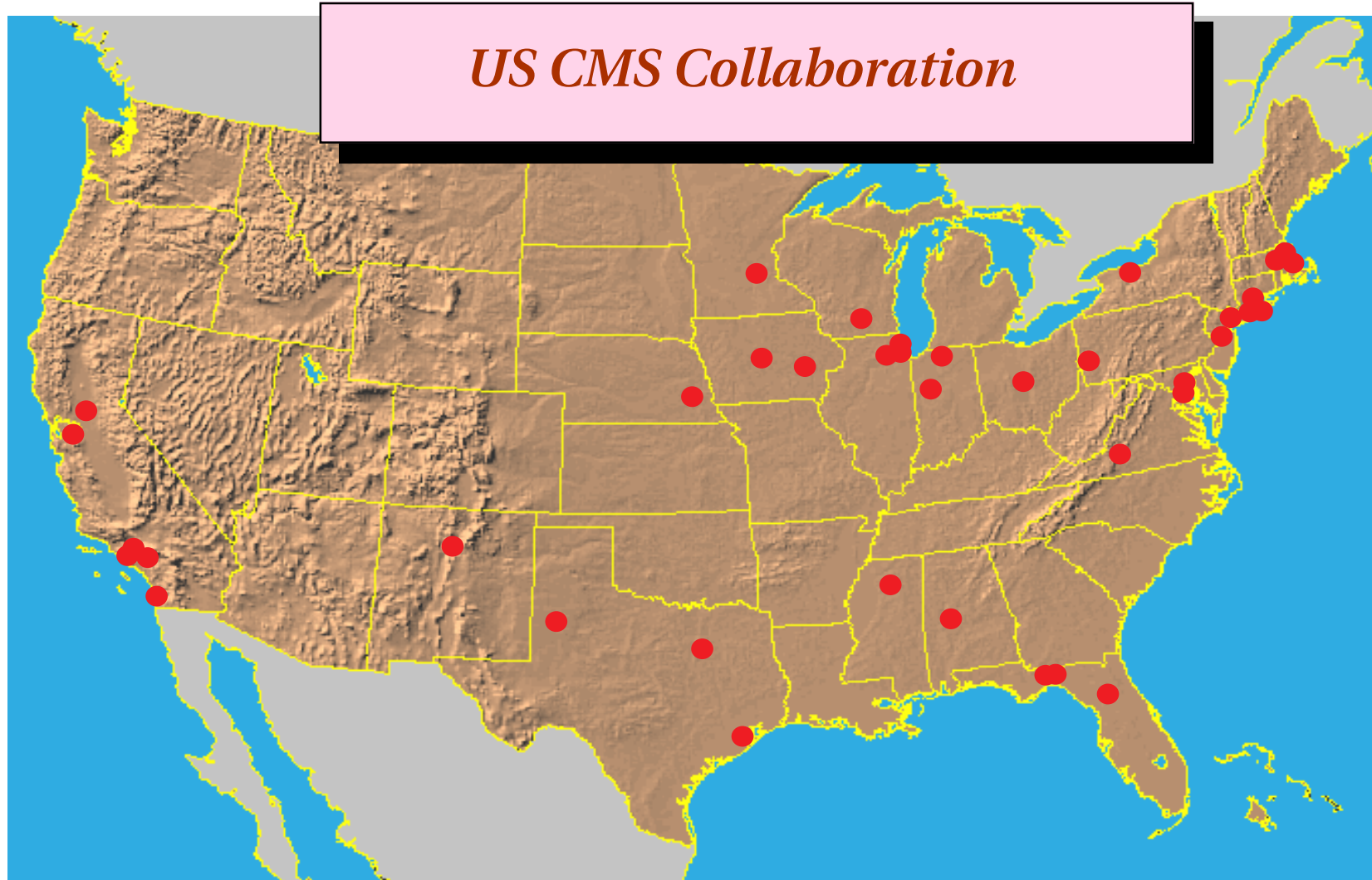
CMS Collaboration

~1700 Physicists and Engineers
151 Institutes
32 Countries





Geography



US CMS Collaboration

~300 of ~2000 US Experimental Physicists



Organizational Principles

Scope of CMS effort:

- The CMS detector, with a CERN budget of ~450 MCHF, is a large project ---perhaps ~900 M\$ by our accounting.
- Responsibility rests with the CMS Spokesman, assisted by his Deputy and several staff members; Technical Coordinator, Resource coordinator, Project Office etc.
- Still too unwieldy, so authority delegated to the individual components subject to coordination and review at higher levels.

US Perspective

- to participate in frontier physics and be good stewards of the funds entrusted us, while at the same time accommodating to the overall imperatives of the larger collaboration.
- Accept responsibility in entirety for some components. Permits a semi-autonomous organization subject to US accounting and management practices and still imbedded within the overall collaboration.



US CMS Project

Project:

- The project organization embodies line responsibility and authority and the duties and procedures are detailed in the Project Management Plan.
- All individuals serving in management positions are appointed and serve at the pleasure of the appointing authority.

What else is needed?

- i) An independent structure or forum for discussion of issues and concerns of the US participants regarding the Project
- ii) A means of addressing matters outside the Project scope.
- iii) A mechanism for effectively interfacing to the larger collaboration
- iv) provide information concerning the excitement and hard results of elementary particle experimentation to students and the larger community



US CMS Constitution

Membership:

- all members of the CMS collaboration from the US are members of US CMS.

Collaboration Board:

- is the primary body, composed of one representative from each US institution in CMS.

1 Institution = 1 vote; preferably by consensus, otherwise majority

elects a Spokesperson, who also as the Chair of the CB for a 2 year term - renewable.

- acts to amend and to ratify by majority vote modifications to the Constitution.

Additional members are welcome!

(No adjustment of Project funding)



Constitution II

Component Institutional Boards

composed of the CB representatives of each institution participating in a particular component or activity.

a coordinator is elected for each activity to input and act for the collaboration on matters concerning their activity.(2-year term)

Executive Board

- composed of the component or activity coordinators, *ex officio* the TD and the CPM and is chaired by the Spokesperson.
- together with the Spokesperson, the EB is responsible for the those issues beyond the scope of the Project.



Spokesperson

Duties of the Spokesperson

- To Represent the interests of the US members within CMS

Examples:

Member of the CMS Management Board

Participant in the negotiation of the Detector protocol for the US-CERN Agreement.

Participant in the negotiation with the larger CMS collaboration of the scope revisions

Presenter of US CMS activities to HEPAP

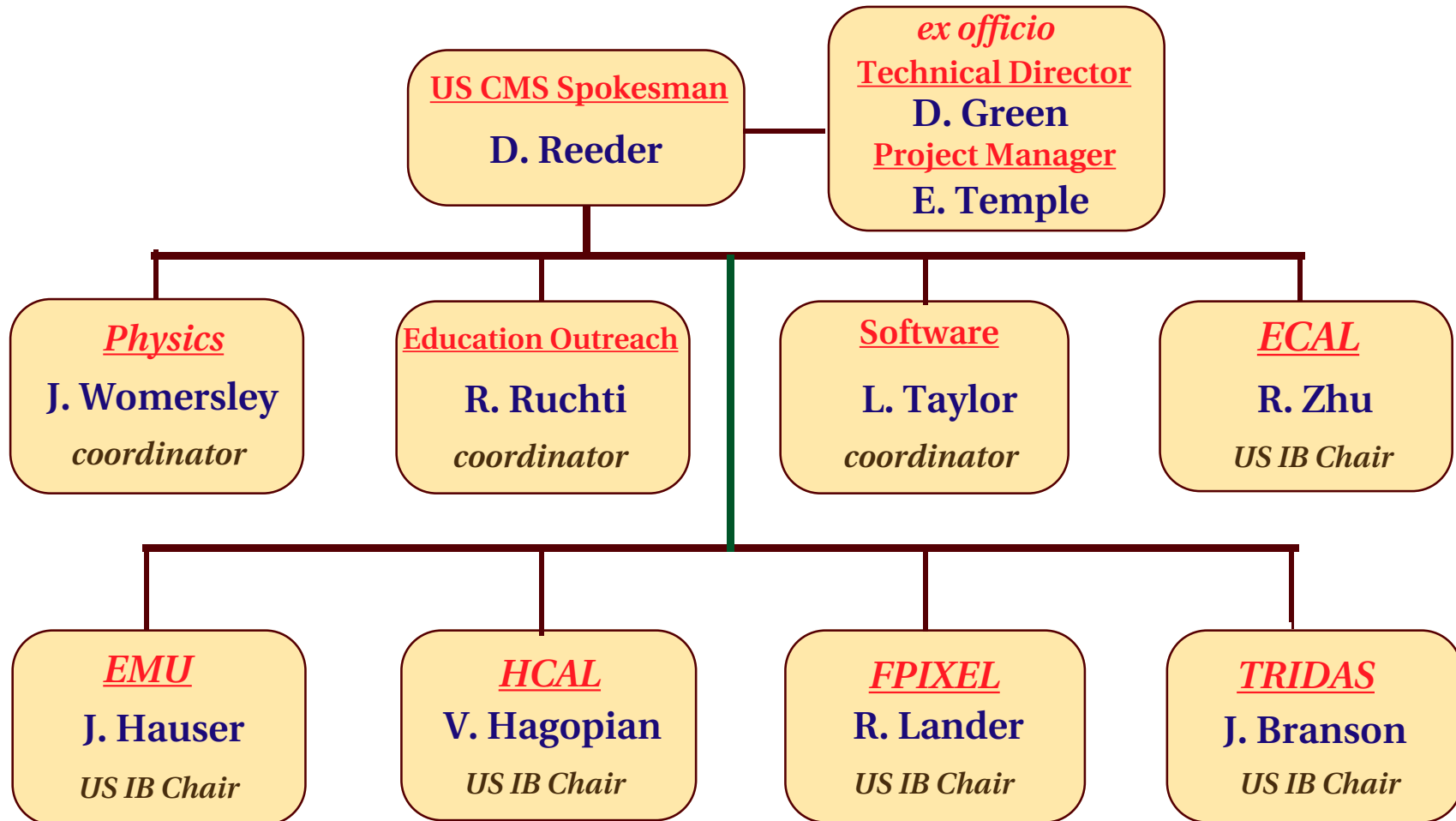
Member of the Speakers Committee for CMS

- To Organize and chair meetings of the CB and EB.
- To Conduct elections of the Coordinators.



Collaboration Organization

Executive Board - 1998





Beyond the Project

Need to segue seamlessly from Project to Experiment

Among the requirements are:

- large volume, rapid and secure communication and data transfer.
- ability to participate in the analysis in an active and timely fashion
- meet our responsibility for operation and maintenance of our components.
- to communicate the progress and results both within the HEP community and to the larger lay community.

How?

- state-of-the-art networking facility (ESNET progeny?)
- timely acquisition of computing, data storage and software
- ramp up the pre-op activities as the project winds down.
(a rough estimate of the costs for this is ~ 9M\$ annually at completion of the ramp-up.)
- education and outreach activity with sufficient resources. (people + \$)