

# Overview of the DoD Center for Geosciences/Atmospheric Research at CSU

## Research Themes and Presentations

Dr. Tom Vonder Haar  
Recipient Program Manager

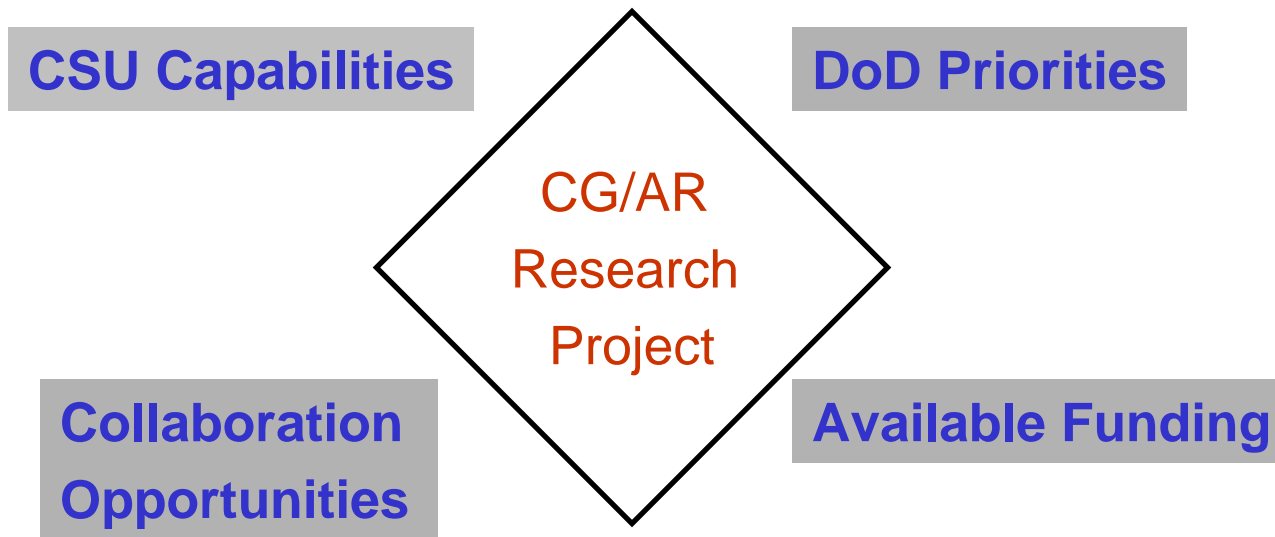


# Background of “CG/AR”

- ◆ Began as competitive DoD University Research Initiative (URI) Award to CSU via ARO in 1986
- ◆ Multi-disciplinary Research (6.2 & 6.1)
- ◆ Normal LOE ~ \$2 to 3 M/yr via Cooperative Agreement with ARL
- ◆ Army, Navy, Air Force; Tri-Service focus
- ◆ >100 Graduate/Undergraduate participants over 19 years
- ◆ Graduates continue in DoD research



# Research and Tech Transition Projects are a 4-Way Match



# Research Projects are Organized into Six Research Themes in an Annual Program Plan (APP)

- ◆ Hydrometeorology
- ◆ Cloud Structure, Dynamics and Climatology
- ◆ N-Dimensional Data Assimilation and Fusion
- ◆ Boundary Layer Atmospheric Chemistry and Aerosols
- ◆ Derivation of Battlespace Parameters
- ◆ Technology Transition and Interactions

# The Annual Program Plan for CG/AR for May '06 – April '07

- ◆ to be developed in January '06 by the CG/AR Cooperative Agreement Manager (Ms. Pamela Clark) and the Recipient Program Manager (Dr. Tom Vonder Haar)
- ◆ with Tri-Service input from the DoD Review Panel
- ◆ and advice from DoD lab scientists and CG/AR project leaders
- ◆ when the Congressional FY 06 funding for CG/AR is set



# Level of Effort under the CG/AR Cooperative Agreement with ARL

	<u>05/06</u>	<u>06/07 (est.)</u>
(Annual Period is May through April)		
	\$1.5 M	\$2.25 M
<b>Hydrometeorology</b>	15% (4 students)	10% (3 students)
<b>Cloud Structure and Climatology</b>	15% (3 students)	20% (4 students)
<b>N-Dimensional Data Assimilation and Fusion</b>	20% (1 student, 2 post docs)	20% (2 students, 2 post docs)



# Level of Effort under the CG/AR Cooperative Agreement with ARL (cont'd)

	<u>05/06</u>	<u>06/07 (est.)</u>
(Annual Period is May through April)		
	\$1.5 M	\$2.25 M
Boundary Layer Atmospheric Chemistry and Aerosols	10% (2 students, 1 post doc)	15% (2 students, 1 post doc)
Derivation of Battlespace Parameters	20% (5 students)	15% (4 students)
Technology Transition and Interactions	20%	20%
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	100%	100%



# Special CG/AR Activities - 2005

- ◆ Continuing new Adaptive Sound Prediction System and Analysis project as recommended at Jan 2003 DoD Annual Review
- ◆ Began transition from RAMS to WRF model use
- ◆ Continuing joint CG/AR–ARL–USACE project on Soil Moisture mapping with new NPOESS microwave observations (*supported ~50% by NPOESS IPO*)
- ◆ Considering several new research projects related to DoD needs
- ◆ Special Seminars and Visits to USACE, NRL, and ARL
- ◆ 38 new publications and reports this past year
- ◆ Participation in ARL-organized video conferences



# This Annual Review of CGAR's 2005 Research

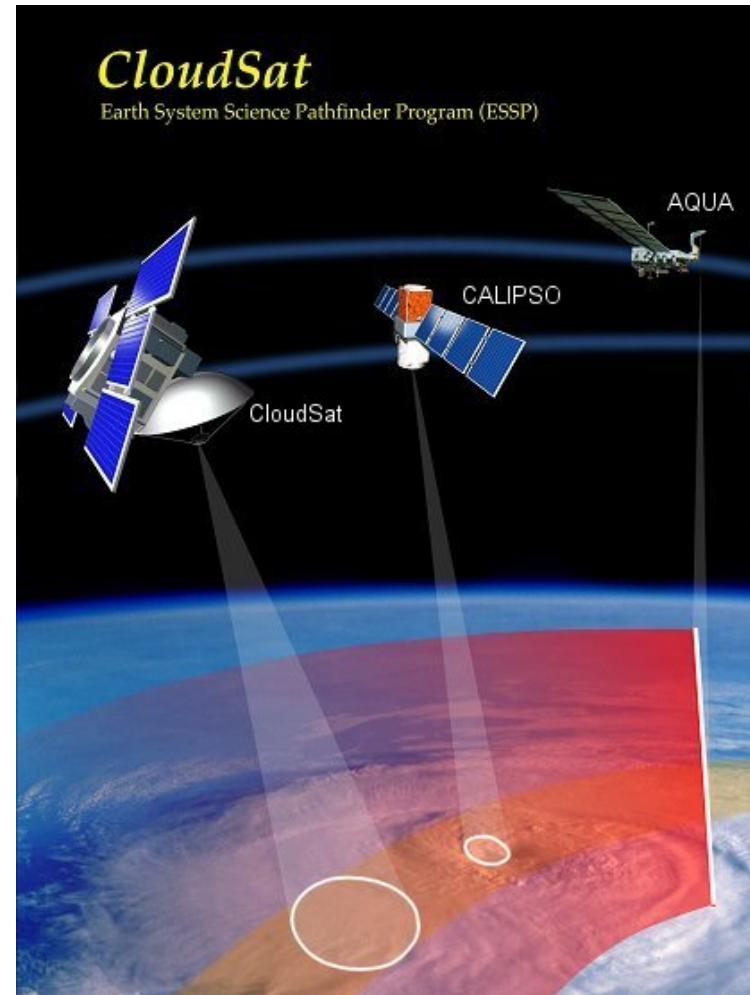
## Includes:

- ◆ Presentations of DoD Initiatives and Service Requirements (Army, Navy, Air Force)
- ◆ 11 oral presentations and 15 posters of 2005 research results at CG/AR
- ◆ Discussions of Technical and Tech Transfer collaborations with the DoD Labs and other groups
- ◆ Discussions of DoD Priorities, Collaborations and Future Research



# Improved CFLOS from A-Train Sensor Data (CFLOS-AT)

1. First Ever Cloud Base Measurements from Space
2. Combined CPR Radar (CloudSat) Cloud Profile and Lidar (CALIPSO) Aerosol Profile as an adjunct to MODIS (Aqua)
3. Improved CFLOS measurements and climatologies
4. CIRA is the Data Processing Center for CloudSat and related A-Train Auxiliary Data



# Back-up slides

