

# CIRPAS Twin Otter briefing



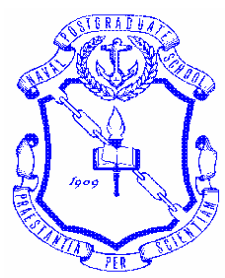
- 2004 summary
- 2005 schedule
- 2006 requests (as of 04/01/2005)
- Instrumentation news
- Publications



# 2004 missions

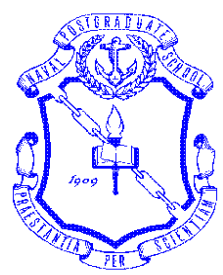


Project	Location	Period	Sponsor	Lead Scientist
<b>Bi-weekly ocean surveys</b>	<b>Marina, CA</b>	<b>Jan-Mar</b>	<b>ONR</b>	<b>Steven Ramp, NPS</b>
<b>EVE</b>	<b>Marina, CA</b>	<b>Ap-May</b>	<b>NASA</b>	<b>Jens Redemann, NASA Ames</b>
<b>CARMA-II</b>	<b>Marina, CA</b>	<b>July</b>	<b>ONR</b>	<b>Dean Hegg, U. Washington</b>
<b>ICARTT</b>	<b>Cleveland, OH</b>	<b>August</b>	<b>NSF/ON R/NOAA</b>	<b>John Seinfeld, Caltech</b>
<b>Heavy maintenance</b>		<b>Oct-Nov</b>		



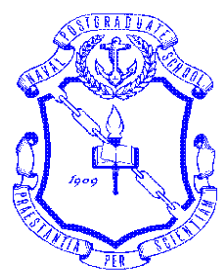
## 2005 Missions

Project	Location	Period	Sponsor	Lead Scientist
<b>Ocean survey</b>	<b>Marina, CA</b>	<b>Feb</b>	<b>ONR</b>	<b>Steven Ramp, NPS</b>
<b>Engineering flights</b>	<b>Marina, CA</b>	<b>Mar</b>	<b>SBIR</b>	<b>Haf Jonsson, CIRPAS</b>
<b>CSTRIPE-II</b>	<b>Marina, CA</b>	<b>July</b>	<b>ONR</b>	<b>John Seinfeld, Caltech</b>
<b>CARMA-III</b>	<b>Marina, CA</b>	<b>August</b>	<b>ONR</b>	<b>Dean Hegg, U. Washington</b>
<b>CALIPSO</b>	<b>Newport,</b>	<b>Sept</b>	<b>NASA</b>	<b>Jens Redemann</b>
<b>IOP-Followup</b>	<b>Ponca City</b>	<b>Sept</b>	<b>DOE</b>	<b>Beat Schmid</b>
<b>Lidar-winds</b>	<b>Marina</b>	<b>Oct</b>	<b>NPOESS</b>	<b>Dave Emmitt</b>
<b>TOWPL</b>	<b>Marina</b>	<b>Oct-&gt;</b>	<b>ONR</b>	<b>Kehlif</b>



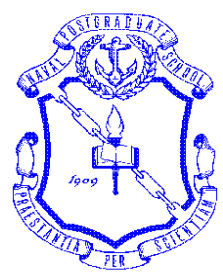
## 2006 Requests

Project	Location	Period	Sponsor	Lead Scientist
Sat. Cal - Val	Darvin	Jan	DOE	Jens Redemann
Lidar Wind Study	North Carolina	Mar/Oct	NPOESS	Dave Emmitt
Ocean/Biology	California	Summer	ONR	Faloona/Raemer
Fluxes	Oregon	Summer	ONR	John Bane
Surveys Cloud chem.	Monterey Houston	August August	ONR NOAA	Steve Ramp Graham Feingold



## NEW INSTRUMENTATION Twin Otter

- **MSP Triple DMA's** – repaired and delivered
  - **NMASS** – delivered
  - **Pro Sensing 94 Ghz cloud radar** – Testflown in March
  - **Stabilized Radiation Platforms**-Repaired and testflown in March
  - **Coherent Technologies wind lidar**-New transceiver delivered
  - **Phased Doppler Cloud Spectrometer**-Testflow in March
  - **SP2 carbon particle spectrometer** – delivered
  - **SCAPS** single particle scatter probe – delivered and testflown in March
- LISST, S-CIP** and **TOWED PLATFORM** anticipated this year.

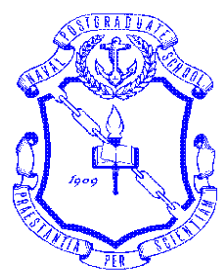


# CIRPAS Publications 2004

- 1) Fridlind, A. M., Andrew S. Ackerman, Eric J. Jensen, Andrew J. Heymsfield, Michael R. Poellot, David E. Stevens, Donghai Wang, Lawrence Milosevich, Darrel Baumgardner, R. Paul Lawson, James C. Wilson, Richard C. Flagan, John H. Seinfeld, **Hafliði H. Jonsson**, Timothy M. VanReken, Varutida Varutbangkul, Tracey A. Rissman, 2004: Evidence for the Predominance of Mid-Tropospheric Aerosols as Subtropical Anvil Cloud Nuclei, *Science*, 304, 718-722.
- 2) Kahn, R., J. Anderson, T.L. Anderson, T. Bates, F. Brechtel, C.M. Carrico, A. Clarke, S.J. Doherty, E. Dutton, R. Flagan, R. Frouin, H. Fukushima, B. Holben, S. Howell, B. Huebert, A. Jefferson, **H. Jonsson**, O. Kalashnikova, J. Kim, S-W. Kim, P. Kus, W-H. Li, J.M. Livingston, C. McNaughton, J. Merrill, S. Mukai, T. Murayama, T. Nakajima, P. Quinn, J. Redemann, M. Rood, P. Russell, I. Sano, B. Schmid, J. Seinfeld, N. Sugimoto, J. Wang, E.J. Welton, J-G. Won, S-C. Yoon, (2004), Environmental Snapshots From ACE-Asia, *J. Geophys. Res.*, 2003JD004339R
- 3) Wendisch, M., P. Pilewskie, E. Jakel, S. Schmidt, J. Pommier, S. Howard, **H. H. Jonsson**, H. Guan, M. Schroder, and B. Mayer, 2004: Airborne Measurements of Areal Spectral Surface Albedo over Different Sea and Land Surfaces, *J. Geophys. Res.*, **109** (D08203), 4633, doi: 10.1029/2003JD004392.
- 4) Crahan, K. K., D. A. Hegg, D. S. Covert, **H. H. Jonsson**, 2004: An exploration of aqueous oxalic acid production in the coastal marine atmosphere, *Atmospheric Environment*, **38**, 3757-3764.
- 5) Hegg, D. A., P. A. Durkee, **H. H. Jonsson**, K. Nielsen, and D. S. Covert, 2004, Effects of aerosol and SST gradients on marine stratocumulus albedo *Geophys. Res. Lett.*, Vol. 31, No. 6, L0611310.1029/2003GL018909
- 6) Hegg, D. A., D. S. Covert, **H. Jonsson**, D. Khelif, C. Friehe, 2004: Observations of the Impact of Cloud Processing on Aerosol Light-Scattering Efficiency, *Tellus* **56B** 285-293.
- 7) Crahan, K. K., D. A. Hegg, D. S. Covert, **H. H. Jonsson**, Reid, J. S., Kehlif, D., and Brooks, B., 2004: Speciation of Organic Aerosols in the Sub-tropical Mid-Pacific and their Relationship to Light Scattering, *J. Atmos. Sci.*, **61**, 2544-2558.
- 8) Conant, W.C., T.M. VanReken, T.A. Rissman, V. Varutbangkul, **H.H. Jonsson**, A. Nenes, J.L. Jimenez, A. Delia, R. Bahreini, G. Roberts, R.C. Flagan, and J.H. Seinfeld, Aerosol-Cloud Drop Concentration Closure in Warm Cumulus, *Journal of Geophysical Research*, 109, D13204, doi:10.1029/2003JD004324 (2004).
- 9) Taylor, P. and **H. Jonsson**, 2004: Thunderstorm Asthma, *Current Allergy and Asthma Reports*, **4**(5), 1-6.
- 10) Bane, J. M., R. Bluth, C. H. Flagg, C. A. Friehe, **H. H. Jonsson**, K. Melville, M. Prince, and D. Riemer, Research Aircraft Facilities for U.S. Ocean Sciences, 2004, *Oceanography*, **17**, 176-185.

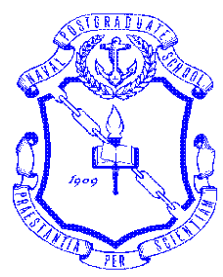
## In Press:

- 11) Sharon, T. M., B. A. Albrecht, **H. H. Jonsson**, and P. Minnis, 2004: Aerosol and Cloud Microphysical Characteristics of Rifts and Gradients in Maritime Stratocumulus Clouds, (In Press since Feb 2004).
- 12) Khelif, D., C.A.Friehe, **H. Jonsson**, Q. Wang, and K. Rados, 2004: Wintertime Boundary-Layer Structure and Air-Sea Interaction Over the Japan/East Sea, (Accepted for publication in Deep-Sea Research II JES Special Issue July 2003).
- 13) Phillips V. T. J., Sherwood, S. C., Andronache, C., Bansemmer, A., Conant, W. C., Demott, P. J., Flagan, R. C., Heymsfield, A., **Jonsson, H.**, Poellot, M., Seinfeld, J. H., VanReken, T., Varutbangkul, V., and Wilson, J. C., 2005, Anvil Glaciation in Deep Cumulus Updraft over Florida Simulated with an Explicit Microphysics Model. Part I –The Impact of various Nucleation Processes. (Accepted for publication in Quarterly Journal of The Royal Meteorological Society).
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- 15) Feingold, Furrer, Pilewskie, Remer, Min, and **Jonsson**, 2005, Aerosol Indirect Effect Studies at Southern Great Plains during the May 2003 Intensive Operations Period, (Submitted to *J. Geophys. Res*).
- 16) Ferrare, R., D. Turner, M. Clayton, B. Schmid, J. Redemann, D. Covert, R. Elleman, J. Ogren, E. Andrews, J. Goldsmith, **H. Jonsson**, 2005, Evaluation of Daytime measurements of Aerosols and Water Vapor made by an Operational Raman Lidar over the Southern Great Plains (Submitted to *J. Geophys. Res*).
- 17) Steven J. Ghan, Tracey A. Rissman, Robert Elleman, Richard A. Ferrare, David Turner, Connor Flynn, Jian Wang, John Ogren, James Hudson, **Hafliði H. Jonsson**, Timothy VanReken, Richard C. Flagan, and John H. Seinfeld, 2005, Use of In Situ Cloud Condensation Nuclei, Extinction, and Aerosol Size Distribution Measurements to Test a Method for Retrieving Cloud Condensation Nuclei Profiles from Surface Measurements, (Submitted to *J. Geophys. Res*).
- 18) Tracey A. Rissman, Timothy M. VanReken, Jian Wang, Roberto Gasparini, Donald R. Collins, Yin-Nan Lee, **Hafliði H. Jonsson**, Fred J. Brechtel, Richard C. Flagan, and John H. Seinfeld, 2005, Characterization of Cloud Condensation Nuclei (CCN) during the 2003 Atmospheric Radiation Measurement (ARM) Aerosol Intensive Operational Period (IOP) at the Southern Great Plains (SGP) Site in Oklahoma, (Submitted to *J. Geophys. Res*).



# CIRPAS Publications cntd

- 19) Schmid, B., R. Ferrare, C. Flynn, R. Elleman, D. Covert, A. Strawa, E. Welton, D. Turner, **H. Jonsson**, J. Redemann, J. Eilers, K. Ricci, A. G. Hallar, M. Clayton, J. Michalsky, A. Smirnov, B. Holben, J. Barnard, 2005, How well can we measure the vertical profile of aerosol extinction (Submitted to *J. Geophys. Res.*)
- 20) Strawa, A.W., Arnott, A.P., Elleman, R., Hallar, A.G., Covert, D., Ricci, K., Provencal, R., Owano, T., **Jonsson, H.**, Schmid, B., Luu, A.P., Bokarius, K., 2005, Comparison of In-Situ and Remote Aerosol Optical Property Measurements During the DOE Aerosol IOP (In preparation).
- 21) Jian Wang, Yin-Nan Lee, Linda Bowerman, **Haf Jonsson**, Roberto Gasparini, Don Collins, Betsy Andrews, Pat Sheridan, John Ogren, 2005, Aerosol size distributions during ARM aerosol IOP (In preparation).
- 22) Kuzmanoski, M., M.A. Box, B. Schmid, J. Wang, P. B. Russell, **H. H. Jonsson**, R. C. Flagan, J. H. Seinfeld, 2005, Aerosol Properties from aircraft-based observations during the Ace Asia campaign: 1. Aerosol size distributions retrieved from optical thickness measurements. (In preparation).
- 23) Arnott, P., J. W. Walker, D. S. Covert, R. E. Elleman, **H. H. Jonsson**, W. C. Conant, R. C. Flagan, and J. H. Seinfeld, Photoacoustic Insight for Aerosol Light Absorption Aloft from Meteorological Aircraft and Comparison with Particle Soot Absorption Photometer Measurements: The DOE Southern Great Planes Climate Research Facility and the Coastal Stratocumulus Imposed Perturbation Experiments (In Preparation).



# Mission (Publication) Cross reference



- 1) Drizzle and Entrainment Cloud Study, Monterey 1999, (11)
- 2) Japan East Sea Experiment, Misawa Japan 2000, (12)
- 3) ACE ASIA, Iwakuni Japan 2001, (2, 3, 22)
- 4) RED, Hawaii, 2001 (7)
- 5) CRYSTAL PHASE, Key West Florida 2002, (1,8,13)
- 6) DOE-IOP, Ponca City, Oklahoma, 2003 (14,15,16,17,18,19,20,21)
- 7) C-STRIPE, Marina, 2003 (23)
- 8) CARMA-II, Marina 2003 (4,5,6)
- 9) Leisure (9, 10)