

PACE EARLY ADOPTERS

Early Adopter	Applied Sciences Category	SAT Partner(s)	Region(s)	EA Project Title	End-user(s)	Application	ARL (current; anticipated)
Anastasia Romanou (NASA-GISS/Colombia U.) Alex Ruane (NASA-GISS) Manishka de Mel (Columbia U.) Cynthia Rosenzweig (NASA-GISS)	Water Resources & Climate	Peter Gaube; Alison Chase	Global	Shifts in biodiversity and linkages to ecosystem health and food security	World Wildlife Fund; UN Disaster Risk Reduction Office; UN Development Program (UNDP); Wildlife conservation society	Improving global climate model predictions	ARL 3; 9
Chuanmin Hu (USF)	Disasters	Matteo Ottaviani	United States	Detecting and differentiating oil slicks through PACE measurements	Oil companies; Oil management agencies (BOEM, BSEE); NOAA NRDA; NOAA CoastWatch; US Environmental Protection Agency	Detection and mapping of oil slicks/spills in the Gulf of Mexico	ARL 2; TBD
Clarissa Anderson (Scripps) Raphael Kudela (UCSC) Richard Stumpf (NOAA) Dale Robinson (UCSC) Veronica Lance (NOAA)	Water Resources	Nima Pahlevan	California Coast	Applying PACE products to the California Harmful Algae Risk Mapping (C-HARM) System	NOAA CoastWatch; NOAA NESDIS-STAR	HAB mapping	ARL 9; 7/8
Jason Jolliff (NRL) Sherwin Ladner (NRL) David Lewis (NRL)	Water Resources	Michael Twardowski	Gulf of Mexico, CONUS	Ocean Colorimetry with PACE	NRL-Ocean Modeling and Prediction Branch	Turbid waters monitoring; Sediment plume tracking	ARL 2; 7
Liz Ferguson (Ocean Science Analytics) Craig Risien (OSU)	Water Resources	Toby Westberry	Oregon	Coastal and Offshore Oregon Marine Mammal Ecological Study	Commercial & Recreational Fishing Industry; Online training community	Marine mammal tracking; GIS software; Online training sessions	ARL 2; 6
Marina Marrari (FECOP)	Water Resources	Brian Barnes	Costa Rica, Central America	Pezca: Near real time satellite data distribution platform for Central America: Monitoring and fisheries applications.	Recreational anglers, commercial fishermen, tourism agents, NGOs, government officials and the academic sector	Mobile app. for fishing & recreation	ARL 3; 9

PACE EARLY ADOPTERS

Early Adopter	Applied Sciences Category	SAT Partner(s)	Region(s)	EA Project Title	End-user(s)	Application	ARL (current; anticipated)
Damian Brady (U. Maine) Emmanuel Boss (U. Maine) Andrew Thomas (U. Maine) Carter Newell (Pemaquid Oyster and Mussel) Chris Davis (ME Aquaculture Innovation Center)	Water Resources	Emmanuel Boss	Gulf of Maine	Aquaculture Site Prospecting: Applying PACE products to sustainable aquaculture site selection	Limited Purpose Aquaculture License holders	Aquaculture site selection	ARL 6/7; 7/8
Mariusz Pagowski (NOAA CERES/ CU Bolder) Arlindo da Silva (NASA/ GMAO) Daryl Kleist (NOAA/ NWS/ EMC)	Air Quality & Climate	Snorre Stames; Jacek Chowdhary; Lorraine Remer	Global	Assessing Potential of PACE Aerosol Products for Data Assimilation	NOAA/Climate Prediction Office/The Modeling, Analysis, Predictions, and Projections Program; NOAA/Office of Weather and Air Quality	Prediction of global aerosols to study impact on weather and climate	ARL 4/5; 7
Heather Holmes (U. Utah)	Air Quality	Alexei Lyapustin	Western United States	Modeling spatial and temporal exposure to air pollution in the western U.S.	Washoe County Air Quality Management Division	Wildfire/smoke forecasting	ARL 2; 5/6
Rick Stumpf (NOAA) Shelly Tomlinson (NOAA)	Water Resources	Robert Shuchman	United States	Discriminating algal blooms in turbid coastal, estuarine and large lake environments	State managers in Florida, Maryland, Virginia, Ohio, California	Inland/estuarine CyanoHAB mapping	ARL 3; 6
Daniel Tong (GMU)	Air Quality	Pengwang Zhai; Jacek Chowdhard	United States	Satellite based marine emissions of trace gases and organic aerosols	National Weather Service (NWS)	Trace gas & aerosol emission modeling/tracking	ARL 4/5; 7/8
Dustin Carroll (Moss Landing-SJSU) Dimitris Menemenlis (JPL)	Water Resources & Climate	Cecile Rousseaux	Global	The Data-assimilative, Global-ocean ECCO-Darwin Biogeochemistry Model	ECCO Consortium; Columbia University; California Institute of Technology	Global-ocean biogeochemistry model	ARL 6; 7
Jessica Turner (VIMS) Marjorie Friedrichs (VIMS) Carl Friedrichs (VIMS)	Water Resources	Robert Frouin; Emmanuel Boss	Chesapeake Bay	Water clarity and particle size from hyperspectral remote sensing reflectance	Chesapeake Bay Program Modeling Work Group; Chesapeake Bay Program Scientific, Technical Assessment and Reporting Work Group;	Water clarity & particle size indicator and tracking tool	ARL 4; 7

PACE EARLY ADOPTERS

Early Adopter	Applied Sciences Category	SAT Partner(s)	Region(s)	EA Project Title	End-user(s)	Application	ARL (current; anticipated)
					Virginia Shellfish Aquaculture Industry Advisory Committee		
Hunter Erickson (Hyphae) Jeff Lloyd (Hyphae) Elizabeth Freele (Hyphae)	Water Resources	Nima Pahlevan	Not Specified	Managing Environments in the Palm of your Hand- Hyphae Internet	Ocean-based solution makers; Natural capital decision makers; Environmentally conscious individuals	Info. dissemination mobile app. for ocean health	ARL 4; 8
Michael Ondrusek (NOAA) Charles Kovach (NOAA)	Water Resources	Mike Sayers	Chesapeake Bay	Development and assessment of hyperspectral ocean color products for PACE	Maryland DNR; NOAA CoastWatch;	TSM concentration & quantification in inland/coastal waters	ARL 3; 6
Jordan Borak (UMD/GSFC)	Ecological Forecasting & Water Resources	Fred Huemmrich	Chesapeake Bay; Southeast Virginia	Mapping Wetland Vegetation Parameters with PACE's Ocean Color Instrument	Chesapeake Bay water quality managers and run-off modelers; Coastal Virginia and Maryland city managers and disaster/flooding responders	Wetland Vegetation Mapping	ARL 2; 6
Hiroto Higa (Yokohama National University) Eko Siswanto (JAMSTEC) Salem Ibrahim (Kyoto Univ. of Adv. Sci)	Water Resources	Nima Pahlevan	Japan; Thailand; Indonesia	Harmful Algal Bloom and Red/Blue Tide Detection and Modeling for Coastal and Inland Waters in Asia	Ministry of Land, Infrastructure, Transport, and Tourism, Government of Japan; Port and Airport Research Institute, Marine Environmental Information Group; Chiba Prefectural Fisheries Research Center	HAB/Red tide detection for coastal/inland Japan waters	ARL 2; 7
Antar Jutla (Univ. Florida) Rita Colwell (Univ. of MD)	Water Resources; Public Health	Mike Twardowski; Tim Moore	Chesapeake Bay; Florida Coast	Predictive assessment of clinically active biotreats in coastal and ocean waters using PACE	World Health Organization (WHO); United Nations Office for Coordinator of Humanitarian Affairs (UNOCHA); United Nations International Children's Emergency Fund (UNICEF)	Predictive risk assessment for coastal pathogens/biotreats	ARL 2; 4/5
Moritz Lehmann (Xerra) Ian Hawes (Univ. of Waikato) Ben Knight (Cawthron Institute)	Water Resources	Peter Gaube; Alison Chase	New Zealand	Harmful Algal Bloom detection and monitoring in inland and coastal waters of New Zealand	Environment Canterbury; Bay of Plenty Regional Council; Waikato Regional Council; New Zealand Antarctic Science Platform	HAB detection, monitoring, forecasting for inland/coastal waters in New Zealand	ARL 4;6
Marié Smith (CSIR) Lisl Robertson Lain (University of Cape Town)	Water Resources; Ecological Forecasting	Peter Gaube; Alison Chase	South Africa	Hyperspectral satellite radiometry for HAB and phytoplankton functional type identification in support of South African marine industries	Aquaculture farms, local municipalities, desalination plants, recreational and subsistence fisherpeople; CSIR and Southern Ocean Carbon & Climate Observatory (SOCCO) partners	Fisheries and Aquaculture Decision Support Tool for the South African Coast	ARL 6; 9