

<i>Title</i>	<i>RL</i>	<i>Category</i>	<i>Partners</i>
2017-2023 AOML Contribution to the NOAA Glider Fleet for Tropical Cyclone Forecast Improvements - Module 1	RL9	External Partner NOAA Partner	CIMAS IOOS, NOS ONMS
2020 State of The Climate Report AOML & PMEL Oceans Chapter Co-Author	RL9	NOAA Partner	OCRD
2021 State of The Climate Report AOML & PMEL Oceans Chapter Co-Author Contribution	RL9	NOAA Partner	OCRD
2022 State of The Climate Report AOML & PMEL Oceans Chapter Co-Author Contribution	RL9	NOAA Partner	NESDIS NCEI, OCRD
2023 State of The Climate Report AOML & PMEL Oceans Chapter Co-Author Contribution	RL9	NOAA Partner	NESDIS NCEI, OCRD
2024 AOML Contribution to the NOAA Glider Fleet for Tropical Cyclone Forecast Improvements - Module 2	RL9	External Partner NOAA Partner	CARICOOS IOOS, NOS ONMS, NWS NHC
2024 Commercial Weather Data Numerical Weather Prediction Data Assimilation Optimization	RL9	External Partner NOAA Partner	UCAR NESDIS OSAAP, NWS EMC
2024 State of The Climate Report AOML & PMEL Oceans Chapter Co-Author Contribution	RL5	NOAA Partner	NESDIS NCEI, OCRD
2025 AOML Contribution to the NOAA Glider Fleet for Tropical Cyclone Forecast Improvements - Module 3	RL8	External Partner NOAA Partner	CARICOOS IOOS, NOS ONMS, NWS NHC
A Catastrophe Model for Assessing Wind and Flood Hazard Risk for Florida Accelerating Research and Developments of the Hurricane Analysis and Forecast System Version 2	RL7	External Partner	FSU
	RL9	External Partner NOAA Partner	CIMAS NWS EMC, GFDL
Advancing seasonal outlooks of landfalling hurricanes for the U.S. Atlantic and Gulf Coasts - Base Project	RL4	External Partner NOAA Partner	CIMAS, MSU, NGI NWS CPC
Air-Deployed sUAS and StreamSonde Measurements of Turbulence in the High Wind Tropical Cyclone Surface Layer - Volume 1C of Umbrella (#20511)	RL7	External Partner NOAA Partner Stakeholder	Black Swift Technologies, CIMAS, ERAU, Skyfora NWS EMC, NWS NHC, MAOC NHC
Annual Atlantic Hurricane Season May Outlook	RL8	NOAA Partner	NWS CPC, NWS NHC
AOML capacity for coral propagation and technology development (CRCP Funded)	RL4	NOAA Partner	CRCP
AOML Contribution to a Scale-Aware Three-Dimensional Sub-Grid Scale Turbulent Mixing Parameterization for the Hurricane Analysis and Forecast System	RL4	External Partner NOAA Partner Stakeholder	CIMAS, CIRES, FIU NWS EMC, PSL NHC
AOML Contribution to Building a Comprehensive Capability in HAFS/JEDI to Assimilate All Available Tropical Cyclone Aircraft Observations	RL4	External Partner	CIMAS

AOML Contribution to CPCs Operational Basin-Wide Tropical Cyclone Outlook (Module 1 - Knowledge Transfer)	RL9	NOAA Partner Stakeholder	NWS EMC NHC
AOML Contribution to CPCs Operational Landfalling/Regionalized Seasonal TC Outlook (Module 3a - Knowledge Transfer)	RL4	External Partner NOAA Partner	CIMAS, NGI NWS CPC
AOML Contribution to CPCs Operational Landfalling/Regionalized Seasonal Tropical Cyclone Outlook (Module 4 - R2O)	RL4	External Partner NOAA Partner	CIMAS, NGI NWS CPC
AOML Contribution to CPCs Operational Seasonal Sub-Basin Tropical Cyclone Outlook (Module 3b - R2O)	RL4	External Partner NOAA Partner	CIMAS, NGI NWS CPC
AOML Contribution to CPCs Operational Sub-Basin Seasonal TC Outlook (Module 2a - Knowledge Transfer)	RL9	External Partner NOAA Partner	CIMAS, NGI NWS CPC
AOML Contribution to Forecaster Support Products for Analysis of Tropical Cyclone Intensity and Structure from Aircraft Reconnaissance Observations	RL5	External Partner NOAA Partner Stakeholder	CIMAS, NCAR, University of Colorado NWS EMC, NWS NHC NHC
AOML Contribution to Real-time Visualization and Interpretation of the Hurricane Wind Structure and Intensity: From Flight Level to the Surface	RL5	External Partner NOAA Partner Stakeholder	CIMAS, FSU, UCAR NWS EMC, NWS NHC NHC, NCEP
AOML Contribution to the CPC Operational Seasonal Hurricane Outlook - Basin-Wide Tropical Cyclone Activity (Module 2b - R2O)	RL8	External Partner NOAA Partner	CIMAS, NGI NWS CPC
AOML Contribution to: Integration of a Fully Functional Atmospheric UFS-HAFS into JEDI with Weakly Coupled Ocean Data Assimilation Capability	RL6	External Partner NOAA Partner	CIMAS, UMD, RSMAS, UO NWS EMC
AOML CWOW Atlantic Node (OceanWatch)	RL8	External Partner NOAA Partner	CIMAS, Universidade de Santiago de Compostela STAR
AOML Deep Argo	RL8	External Partner NOAA Partner	CIMAS, UC, WHOI IOOS, CPO, PMEL
AOML Development of NOAA Seasonal Severe Weather (SSW) outlook for the US	RL4	External Partner NOAA Partner	CIMAS NWS CPC, NWS SPC, NSSL
AOML Omics Analysis in Support of the NOAA Mussel Watch 2020 Southeast Project	RL4	NOAA Partner	SDI

AOML PIRATA Northeast Extension	RL8	External Partner NOAA Partner Stakeholder	Brazilian Navy, CNRS, CIMAS, Helmholtz Association of Research Centers, Howard University, IRD, JISAO, MeteoFrance, NCAS, University of Miami NESDIS NCEI, STAR, IOOS, NWS NHC, GOMO, PMEL, MAOC CIMAS, NCEP, OSU Argentine Naval Hydrographic Service, CIMAS, ENS, IFREMER, Republic of South Africa Department of Environmental Affairs, Universidade de Sao Paolo/University of Sao Paolo, University of Brest, University of Buenos Aires
AOML Southwest Atlantic Meridional Overturning Circulation (SAM)	RL8	External Partner NOAA Partner	NESDIS NCEI, IOOS, CPO, GOMO, OAR HQ Australia Bureau of Meteorology, BMKG, DHN, CSIRO, CIMAS, ECCC, KIOST, MeteoFrance, MetService, IEO, MEMR, SAWS, USCG, DOD, Universidad de Valparao, Chile, UC
AOML Surface Drifter Program	RL8	External Partner NOAA Partner Stakeholder	CSSD, IOOS, NWS CPC, NWS NHC, OAR HQ ECMWF, NCEP, NWS WFOs
AOML U.S. Argo Program - Global Observations for Understanding and Prediction of Climate Variability	RL8	External Partner NOAA Partner	CIMAS, UC, UW, WHOI IOOS, PMEL
AOML Western Boundary Time Series in the Atlantic Ocean	RL8	External Partner NOAA Partner	CIMAS, National Oceanography Centre, UNOLS, RSMAS NOS COOPS, IOOS, MAOC
AOML XBT Network	RL8	External Partner NOAA Partner	CIMAS IOOS
AOML's Contribution to Operational Implementation of the Hurricane Analysis and Forecast System Version 3	RL4	NOAA Partner	NWS EMC
Application of Machine Learning Techniques to the Automated Quality Control of Airborne Doppler Radar Data Used in Operational Analysis of Hurricane Winds and Reflectivity	RL4	External Partner NOAA Partner Stakeholder	CSU, CIMAS NWS EMC, NWS NHC, MAOC NHC
Assessing Coastal Water Quality for FKNMS and Everglades Restoration	RL5	External Partner NOAA Partner	CIMAS NOS ONMS
Assessing refugia potential of marginal and urban reef corals in southeast Florida with population genetics	RL2	External Partner	CIMAS, FAU, Mote Marine Laboratory, RSMAS, UT

Assessing the use of XBT/XCTD observations to investigate the link between barrier layers and hurricane intensity changes	RL2	NOAA Partner External Partner Stakeholder	NMFS SEC, CRCP CIMAS, RSMAS NCEP
Assessment of Emerging Technology Platforms to Improve Resolution of Tropical Cyclone Wind Observations (Umbrella)	RL4	NOAA Partner	NWS EMC, NWS NHC, UAS
Assessment of Water Quality and Habitat Conditions in the Coral Gables Waterway to Inform Management and Restoration	RL2	External Partner	FIU, RSMAS
Atlantic Hurricane Season Outlook August Update	RL8	NOAA Partner	NWS CPC, NWS NHC
Attribution of past present and future sea-level changes along the United States east seaboard for Infrastructure Investment and Jobs (Act IIIJA)	RL2	External Partner	CIMAS
Barataria Basin IEA	RL7	External Partner NOAA Partner	CIMAS, LDWF, DOD NMFS HC, NMFS SEC, NOS NCCOS
Characterizing and forecasting coastal ecosystem responses to multiple stressors for management applications in South Florida	RL2	External Partner NOAA Partner	CIMAS, FWC, NGI, USF, VIMS SECOORA, GLERL
Commercial Weather Data Numerical Weather Prediction Data Assimilation Optimization	RL9	External Partner NOAA Partner	UCAR NESDIS OSAAP, NWS EMC
Coupling the Next-Generation Ocean Model for HAFS	RL6	External Partner NOAA Partner Stakeholder	CIMAS NWS EMC NHC
Develop a prototype Hazardous Weather Testbed experiment focused on products and services associated with a landfalling tropical cyclone	RL5	External Partner NOAA Partner	CIMAS NWS AFSO, NWS NHC, NWS WFOs, GSL, NSSL, WPO
Developing a more resilient Southwest Atlantic Meridional overturning circulation (SAM) array	RL2	External Partner NOAA Partner	CIMAS GOMO
Developing an operational Sargassum Harmful Algal Bloom monitoring and forecasting system for the southeastern US and US Caribbean waters	RL7	External Partner NOAA Partner	CARICOOS, FAU, USVI DPNR, USF CRP
Development and Initial Testing of an Autonomous eDNA Sample Acquisition and Preservation System Using an AUV (Module 1)	RL4	External Partner NOAA Partner	CIMAS, JCVI, MBARI OER
Development of a surface water CO2 reference network SOCONET	RL4	External Partner NOAA Partner	UNOLS OCD
Development of IOLA- Indian Ocean-Land-Atmosphere Coupled mesoscale prediction System for ocean state and coastal hazards over the Indian region (Monsoon Mission 3)	RL4	External Partner	MoES
Development of protocols for biomonitoring Mission Iconic Reefs using eDNA	RL2	External Partner NOAA Partner	FWC, JSU, Mission Iconic Reefs NOS ONMS

Effects of local and global stressors on <i>Orbicella faveolata</i> susceptibility to SCTLD	RL2	External Partner NOAA Partner Stakeholder	CIMAS CRCP EPA
Enhancing subseasonal severe weather predictions through the variable-resolution UFS - AOML contribution	RL3	External Partner NOAA Partner	CIMAS, CIMES, UCAR NWS CPC, GFDL, NSSL
Environmental DNA Enhancement of Fisheries Independent Monitoring Cruises for Ecosystem Based Fisheries Management	RL2	NOAA Partner	NMFS SEC
Evaluation of the 3G ESP LRAUV to Provide Autonomous ?Omics Capacity in Ocean Environments (Module 2)	RL9	External Partner	MBARI
FY21 State of the Climate: Quarterly Reports of the Meridional Heat Transport in the Atlantic Ocean	RL9	External Partner NOAA Partner	Argentine Naval Hydrographic Service, CMA CGM, University of Cape Town GOMO
FY22 State of the Climate: Quarterly Reports of the Meridional Heat Transport in the Atlantic Ocean	RL9	External Partner NOAA Partner	Argentine Naval Hydrographic Service, CMA CGM, University of Cape Town GOMO
FY23 Quarterly Reports of the Meridional Heat Transport in the Atlantic Ocean	RL9	External Partner NOAA Partner	Argentine Naval Hydrographic Service, CMA CGM, University of Cape Town GOMO
FY24 Quarterly Reports of the Meridional Heat Transport in the Atlantic Ocean - Module 4	RL9	External Partner NOAA Partner	Argentine Naval Hydrographic Service, CMA CGM, University of Cape Town GOMO
FY25 Quarterly Reports of the Meridional Heat Transport in the Atlantic Ocean	RL8	External Partner NOAA Partner	Argentine Naval Hydrographic Service, CMA CGM, University of Cape Town GOMO
Global eDNA partnerships supporting Atlantic and global biodiversity monitoring	RL2	External Partner NOAA Partner	CIMAS, MBON, NGI, UN, USF, WCRP STAR
Global ocean genomic observatories to support NGI and NOAA missions	RL4	NOAA Partner	GLERL, OERD
GOFFISH Consortium - AOML Contribution	RL3	External Partner NOAA Partner	CIMAS, FSU NMFS SEC, IOOS, NWS EMC
GOMO-AOML: Ocean Carbon Inventories and Fluxes	RL5	External Partner NOAA Partner	CIMAS, CIRES CPO, GOMO, OAP, PMEL
Hurricane glider observations and data impact studies in support of hurricane intensity forecasts	RL3	External Partner NOAA Partner	CIMAS OPS, NWS EMC
Identification of SCTLD Pathogen through Flow Cytometry & High Throughput Sequencing	RL3	NOAA Partner	CRCP
Improving Wind Speed and Rain Rate Estimates from the SFMR	RL2	External Partner NOAA Partner	FSU, UCAR STAR, NWS NHC

Innovative analysis of deep and abyssal temperatures from bottom- moored instruments	RL3	External Partner NOAA Partner	Princeton University, Republic of South Africa Department of Environmental Affairs, Universidade de Sao Paulo/University of Sao Paolo, University of Buenos Aires, University of Cape Town, University of Trieste
Integrated Ecosystem Assessments for Atlantic and Gulf of Mexico NMS	RL5	External Partner  NOAA Partner	GFDL CIMAS, FWC, DNR, DCR, Texas Parks and Wildlife NMFS NEC, NMFS SEC, NMFS MED, NOS NCCOS, NOS ONMS
Intercalibrating Aircraft Wind Observations to Statistically Consistent 1-minute Sustained Winds for Improved Analysis of TC Intensity and Structure	RL3	External Partner NOAA Partner Stakeholder	FSU, NGI NWS NHC NCEP
Investigating interactions between the tropical cyclone inner core and near environment and their impacts on intensity change (TCRI) and the evolution of the tropical marine boundary layer across transitional boundaries of African easterly waves and the S	RL4	External Partner	DOD, RSMAS
Juvenile Sportfish Monitoring in Florida Bay	RL7	External Partner NOAA Partner	CIMAS, SFWMD, DOD NMFS SEC
Leveraging Transfer Learning on GraphCast to Improve GFS Forecasts	RL2	External Partner Stakeholder	CIMAS NCEP
Merging eDNA observations with concurrent satellite remote sensing data and plankton imagery to support biodiversity monitoring	RL2	External Partner NOAA Partner	CIMAS, FWC, NGI, USF NMFS SEC
Microbial indicators of stony coral tissue loss disease (SCTLD) exposure in corals and associated fomites	RL2	External Partner NOAA Partner	CIMAS, DOD CRCP
Mission: Iconic Reefs: Climate Monitoring	RL4	NOAA Partner	CRCP
Modeling ocean biogeochemical patterns in the Southeast U.S. Coast, Gulf of Mexico, and Caribbean Sea	RL2	External Partner NOAA Partner	MSU, NGI GFDL
Monitoring Mission Iconic Reefs Restoration using eDNA with SASe	RL2	External Partner	CRF, MBON, ONMS
Omics MST support for Coastal Water Quality Measures and Management	RL4	External Partner	City of Miami Beach, University of Miami
Guidance for the City of Miami Beach	RL2	NOAA Partner	NMFS SEC
Omics Testing to Address Stakeholder Concerns: Potential Co-occurrence of Pathogens with Red Tide	RL8	NOAA Partner	STAR, NWS EMC
Optimization of COSMIC-2 Radio Occultation Impacts through Data Assimilation	RL4	NOAA Partner	CRCP
Software Improvements	RL2	External Partner	DOD
Performance-driven restoration and data coordination (CRCP Funded)			
Port Everglades Ecosystem Response Study			

Probabilistic Forecast of Tropical Cyclone-Driven Extreme Wave Heights	RL3	NOAA Partner External Partner NOAA Partner Stakeholder	NMFS SEC CIMAS NWS EMC, NWS NHC, NWS OPC NHC
Real-Time Dissemination of Hurricane Observations from Airborne GPS Dropwindsondes	RL8	External Partner NOAA Partner Stakeholder	NASA, DOD STAR, NWS EMC, NWS NHC, MAOC NCEP
Real-Time Dissemination of Hurricane Wind Fields Determined from Airborne Doppler Radar Data	RL8	NOAA Partner	NWS EMC, NWS NHC, UAS
Reef persistence evaluator: a decision-support tool for management interventions to preserve essential habitat (CRCP Funded)	RL4	NOAA Partner	CRCP
Reefs on the Edge Molecular Insights from Corals in Extreme Environments	RL2	External Partner NOAA Partner	CIMAS, RSMAS NOS OCM, OAP Anduril, Black Swift Technologies, CIMAS
Research to Operation Transition of Hurricane sUAS	RL6	External Partner NOAA Partner Stakeholder	NWS EMC, MAOC Anduril, Black Swift Technologies, NHC CIMAS, RSMAS, University of Southern California
Resilience. Molecular mechanisms behind AOML's CRCP Restoration Pillar.	RL2	External Partner NOAA Partner	NMFS SEC, NOS OCM, OAP
Sargassum Inundation Reports	RL7	External Partner NOAA Partner	USF NESDIS STAR
sUAS Data Assimilation Capability and Enhancement of the Existing Coupled TC Forecast Modeling System (Volume 3 of Umbrella Project #20511)	RL6	NOAA Partner	NWS EMC, NWS NHC, UAS
Supporting Decision Making for designating new National Marine Sanctuaries: an Integrated Ecosystem Assessment approach	RL2	External Partner NOAA Partner	CIMAS NOS ONMS
Sustained monitoring and analysis of western boundary currents in the subtropical North Atlantic	RL2	External Partner	CIMAS
The Impact of Targeted Synoptic Dropsondes on Tropical Cyclone Forecasts in HAFS	RL5	NOAA Partner	NWS NHC
Toward building a subseasonal-to-seasonal red tide and hypoxia warning system for the West Florida Shelf fisheries: Part I. hindcast simulations and validation	RL3	External Partner NOAA Partner	CIMAS, NGI NMFS SEC
Tropical Atlantic Current Observations Study (TACOS)	RL5	External Partner  NOAA Partner Stakeholder	ASU, CIMAS, Howard University, University of Miami, Key Biscayne NESDIS NCEI, GFDL, GOMO, PMEL, MAOC CIMAS, NCEP, OSU
Tropical Cyclone Wind Gust Guidance for National Weather Service Operations	RL3	External Partner NOAA Partner	CIMAS, CIRA NESDIS STAR, NWS EMC, NWS NHC

Unique Turbulence Dynamics in Hurricane Boundary Layers and Improving Their Parameterizations in Numerical Weather Prediction Models	RL2	Stakeholder	NHC
Use of Dragoon sUAS to Enhance Thermodynamic and Kinematic Observations in the Tropical Cyclone Boundary Layer (Volume 1D of Umbrella Project #20511)	RL4	External Partner Stakeholder	CIMAS, University of Houston NCEP
Use of Small Uncrewed Aircraft Data in AWIPS-II for National Hurricane Center Tropical Cyclone Situational Awareness (Volume 2 of Umbrella Project #20511)	RL7	External Partner NOAA Partner	Dragoon Technology, LLC NWS NHC NHC, NCEP Anduril, Black Swift Technologies, CIMAS, Skyfora NWS EMC, NWS NHC, UAS, MAOC
Utilization of Anduril Altius 600 to Enhance Thermodynamic and Kinematic Observations in the Tropical Cyclone Boundary Layer (Volume 1A of Umbrella Project #20511)	RL7	External Partner NOAA Partner	Anduril NWS EMC, NWS NHC, UAS
Utilization of Black Swift Technologies S0 to Enhance Thermodynamic and Kinematic Observations in the Tropical Cyclone Boundary Layer (Volume 1B of Umbrella Project #20511)	RL7	External Partner NOAA Partner	Black Swift Technologies NWS EMC, NWS NHC, UAS
Vector Autoregressive Spatiotemporal (VAST) Modeling in Support of the Assessment of Effects on Aquatic Resources for the Proposed Mid-Breton Sediment Diversion	RL6	External Partner NOAA Partner	CIMAS NMFS SEC
Volume 1-A AOML-EMC Uncrewed observations of the upper ocean and near-surface atmosphere for improved hurricane intensity prediction	RL4	External Partner NOAA Partner Stakeholder	CIMAS, UPR, UW CARICOOS, EDD, OCRD NCEP, NWS WFOs
Volume 1-B AOML-NHC Uncrewed Observations of the Upper Ocean and Near-Surface Atmosphere for Improved National Hurricane Center Analysis	RL7	External Partner NOAA Partner Stakeholder	CIMAS, UW EDD, OCRD NCEP, NWS WFOs