



Projects	Scientific Issues	Type (instruments)
CAMP2Ex (NASA)	Cloud (microphysics) Aerosol - monsoon	P 3 aircraft Lidar, dropsondes, radiometers, etc 3000 miles, 8hr flight duration
PISTON (ONR)	BSISO diurnal cycle interactions land topography processes coastal ocean mixing processes freshwater influence on upper ocean	R/V Thompson ship (3 moorings)
Aeronet (NASA)	aerosol-cloud interactions	station
MPLNet (NASA)	aerosol-cloud interactions	station
LAOAG	vertical profiles of temperature, winds, humidity	Upper air station, with enhanced soundings at 6 hourly)
SCSTIMX	BSISO diurnal cycle multi-scale convection [similarity with PISTON]	TORI ship (CRD, radiosondes) possibly UAV from Dongsha (dropsondes)

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PAGASA		HF-Radar - Z Bbagueio, Subic, Tagaytay Doppler Possibility of additional AWS
China (FIO)	ocean measurements	ship
Korea	diurnal cycle (atmosphere, ocean) air-sea interactions (Mindanao current) Transect from Guam to Philippines to Korea	CTD, microstructure in the ocean

2017	2018												2019
Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
China													
					NTU	NTU						NTU	
							CAMPEX						
							PISTON						
										Korea (until 2021)			
							Laoag						

* Pre cruise on Aug 2017 c/o SALICA

Points for Collaboration

- UAVs to coordinate with CAMPEX for comparison with dropsondes? UAV range 800km radius; can fly from Dongsha; SSTs, airtemp, humidity, wind
- Other NTU-TORI vessels can be used for extra radiosondes
- Additional transects for SCSTIMX, maybe go near coast of the Philippines?

DATA REQUIREMENTS

- **Radiosonde** raw data instead of GTS to ensure high-resolution for boundary layer analysis (BUFR format) – intercomparison of different radiosonde systems
- **CODAR** raw data archived at the site, VISAT transmission not yet working, hopefully operational by 2018 – how about e-mail? For data assimilation, format? Frequency?
- **DOPPLER** raw data; possibility of mobile radar – request to PAGASA with date and location
- **Satellite data** – HIMAWARI, GPM multisensor, COMS rainfall, SST, clouds, MODIS chlorophyll
- **Forecasts** by US COAMPS and NAVGEM, France, Taiwan WRF (3km covering SCS), PAGASA, UK-MET 4km or 1.5 km regional model), Japan NICAM slab-ocean

GAPS

- Land use data from NAMRIA
- soil moisture from PAGASA Agromet stations
- SWOT satellite – freshwater measurements
- Salinity gradients – from underway surveys
- Consolidated satellite products for the campaigns

MODELING and OBSERVATION INTEGRATION

- Pending ECMWF to provide analysis products for MC, YOTC format for YOPP and YMC use
- Radiosonde with IDS, to be sent thru GTS but must be checked before assimilation
- Observations (buoys, underway CTDs, codar) with ID for easy assimilation
- Observations to improve parameterization schemes - model validation and model processes; CCN or aerosols
- Maybe consolidate the various hypotheses for the models? And for the observations?
- US PISTON planning meeting, September 2017
- River discharge data, rain gauge data? Maybe coordination by YMC for MC countries
- Model intercomparison for different observing periods with different events: BSISO, monsoon breaks – focusing on subseasonal
- Ships of opportunity – to resolve SSS & SST in MC
- How about sensors on commercial aircraft