

Available and Planned Observing Systems

NOAA P-3's

- Complete SRA
- Add Lidar ATM
- Add Melville systems
- Add ESRL W-band Radar
- Explore tethered probe technology (fail safe)

Available and Planned Observing Systems

UAS

- Develop BAT technology for low-slow UAS
 - backwash issue
- Develop fast humidity technology for UAS
 - Weight and power issues
- Develop sea spray technology for UAS
- ESRL Scanning W-Band Radar
- Wave sensor (1D spectrum)
- Consider miniature SAR
 - Issues: processing
- Issues
 - Start with aerosonde
 - not sure what wind conditions can be sampled
 - Consider larger platform

Available and Planned Observing

Fixed Platforms (oil rigs, and navy/air force platforms)

- Remote sensors on fixed/moored platforms
 - Lidar/RADAR (sea spray)
 - Doppler for horizontal speeds
 - Flux packages (10m and 30m height)
 - On a few selected platforms
 - estimate 5 for reasonable sampling)
 - Estimated 10 hour setup time for targeted obs.
 - Something for wave spectra & wave breaking
 - Transmit data to land via broadband
 - Standard Met package
- In situ SST
- subsurface temperatures (not on platforms)
- Get ADCP data from MMS (for deep water)
- Get photographs of platforms for planning

Available and Planned Observing

Moored Buoys (for 25 to 40 – maybe 50m/s)

- Wave data are already available from NOAA moored buoys
- Modified buoys
 - ET probe (stress), LICOR (energy & moisture flux) on 10 mast
 - DMT droplet probe (spray)
 - 6 or 10 buoys (\$2M total for instruments)

Drifting Buoys

- Build, deploy 10-20 ET probes
- Purchase, deploy DMT sea spray probes

Observing System Suitable for Forecast System

- Operational models need better physics to assimilate most near-surface observations
- Modeler would like simplified (and improved) parameterizations
- Models would benefit from better surface winds.