MIZOPEX Unmanned Aircraft Project

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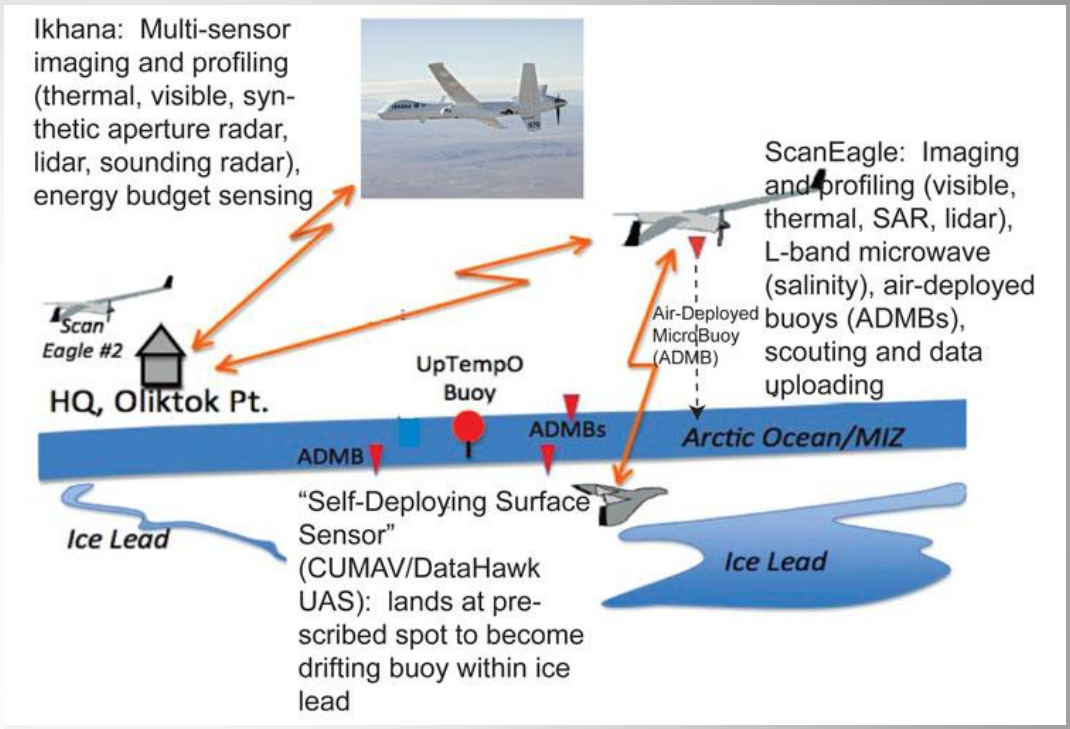
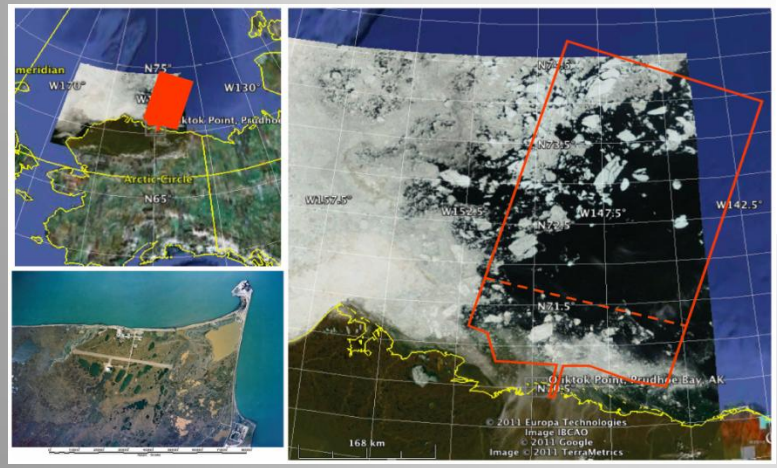
Marginal Ice Zone Observations and Processes Experiment

Goal: Assess Beaufort Sea ocean and ice variability during the 2013 melt season through multi-scale, multi-temporal, multi-sensor observations achieved using unmanned aircraft systems (pending FAA approvals) and in-situ measurements.





NASA UAS: update

UAF/Insitu ScanEagle: Flexibility + low altitude and long duration

CUMAV ("self deploying surface sensor"): low impact, "flying buoy"

Air-Deployed MicroBuoys (small, air-dropped buoys) with surface-to-air data relay.

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http://ccar.colorado.edu/mizopex/index.html

MIZOPEX Aircraft Description & Planned Deployment Schedule

- **UPDATE: NASA SIERRA replaces Ikhana**
  - 20 ft wingspan, 55 knot cruise, 11-hour endurance
  - July 2013: 4 week deployment over Beaufort Sea
  - Used previously in Artic during CASIE (Svalbard)
- AKUAF ScanEagle
  - 10 ft wingspan, 50 knot cruise, long endurance
  - Split deployment: 2 weeks July, 2 weeks August, 2013
- SDSS/Datahawk
  - Hand-launched, expendable (1-2 weeks), short range
  - Single set of deployments – July, 2013

Chief Pilot Mark Sumich next to the SIERRA UAS on the ramp at Moffett Field, CA.

All deployments to be based in Deadhorse/Oliktok Point area