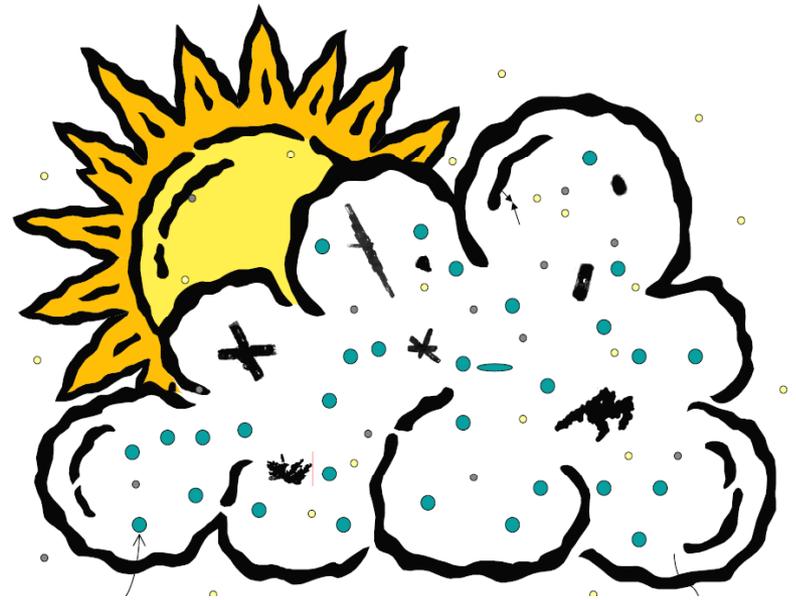


# ISDAC Logistics and Discussion

- ASP
- Hangar
- Aircraft
- Science Drivers
- Measurements
- Other Agencies
- Dates
- Science Plan
- Web site
- Discussion



# ASP Participation

- If ASP participates, it would deploy the ASP G-1 to isolate cloud-borne aerosol and measure its size-distribution, CCN spectrum, and composition.
- ISDAC is one of 12 proposals for ASP field experiments over the next few years.
- The ASP decision by Ashley Williamson by January will depend on how many ASP investigators endorse it for 2008.
- Only one ASP investigator is currently working on microphysics of cold clouds.
- ISDAC is one of the few proposed ASP experiments that has a confirmed experiment to leverage.

# Hangar

- Thanks to Bernie Zak:
- A hangar at Barrow has been reserved.
  - 75' wide X 75' deep X 18-20' high.
  - \$750 per day if relinquished during emergencies.
  - Office space.
  - Telephone and internet can be arranged.

# Aircraft

- Falcon: payload should be adequate
- Citation: payload is not adequate
- G-1: payload adequate
  - Wing pods feasible
  - Too big for hangar
  - Plug in at Barrow; flee to Fairbanks

# Science Drivers

1. How do properties of the Arctic aerosol during April differ from those measured by the M-PACE during October?
2. Which processes produce the strong seasonality of the Arctic aerosol? How well can aerosol models simulate the processes that produce the strong seasonality in the Arctic aerosol?
3. To what extent do the different properties of the Arctic aerosol during April produce differences in the microphysical and macrophysical properties of clouds and the surface energy balance?
4. How well can cloud models and the cloud parameterizations used in climate models simulate the sensitivity of Arctic clouds and the surface energy budget to the differences in aerosol between April and October?
5. How well can long-term surface-based measurements at the ACRF Barrow site provide retrievals of aerosol, cloud, precipitation and radiative heating in the Arctic?

# Other Agencies

- NASA?
- NOAA?
- NSF?

# Measurements

Instrument	Measurements
Rosemont 102 Probe	temperature
Chilled mirror hygrometer	dew-point temperature
Lyman-alpha hygrometer	dew-point temperature
<b>TSI 3025</b>	<b>total particle concentration (&gt; 3 nm)</b>
<b>DMA</b>	<b>aerosol size distribution (0.01-0.75 <math>\mu\text{m}</math>)</b>
<b>PCASP</b>	<b>aerosol size distribution (0.1-3 <math>\mu\text{m}</math>)</b>
<b>TDMA</b>	<b>size-resolved aerosol hygroscopicity (0.015 - 0.6 <math>\mu\text{m}</math>)</b>
DMT CCN counter	CCN concentration (one S)
CFDC	IN concentration
<b>PSAP</b>	<b>optical absorption</b>
<b>Nephelometer</b>	<b>optical scattering</b>
<b>Gust probe</b>	<b>updraft velocity</b>
Gerber probe	LWC
DMT CAPS	temperature, LWC, cloud particle size dist (0.5-1500 $\mu\text{m}$ )
DMT CSI	total condensed water concentration
<b>T-probe</b>	<b>LWC, total condensed water concentration</b>
SPEC CPI	cloud particle image 15-2500 $\mu\text{m}$
<b>Cloud Integrating Nephelometer</b>	<b>cloud extinction coefficient, asymmetry parameter</b>

# Dates

- April 1-30?

# Science Plan

- Begin with proposal
- Trim or expand scope depending on ASP participation.
- Prepare after ASP participation determined.

# Web Site

- Connor Flynn can support.
- Will contain Science Plan, summary of goals, instruments, measurements, period, team members, contact info.

Other Issues?