**Request for MAPNet Facility Support**

Severe Weather Institute – Radar and Lightning Laboratories

University of Alabama in Huntsville

Huntsville, AL 35805

(mapnet@uah.edu)

Version 2023-1a

**Please contact us at the email address above before submitting this form to discuss your MAPNet Facility request**

**Type of Request/Inquiry**

🞏 Research Campaign (multiple MAPNet platforms – see following table)

🞏 Research Campaign (single MAPNet platform – see following table)

🞏 Research Campaign (1-2 instruments – see following table)

🞏 Educational Campaign (multiple MAPNet platforms – see following table)

🞏 Educational Campaign (single MAPNet platform – see following table)

**Facility or Platforms Requested \***

|  |  |  |  |
| --- | --- | --- | --- |
| **Line number** | **Platform/Facility** | **Requested (Yes/No)** | **Number or components requested** |
| 1 | MIPS |  |  |
| 2 | RaDAPS |  |  |
| 3 | MoDLS |  |  |
| 4 | MAX |  |  |
| 5 | Instrument (specify)1 |  |  |
| 6 | Upsonde expendables |  |  |
| 7 | Other 2, 3, 4 |  |  |

1 Instrument desired (generally a subset of the MoDLS platform, e.g., an instrument that is readily separated from the parent MAPNet platform, such as Doppler lidar, radiometer, etc.)

2 BSL = SWIRLL Balloon Sounding Lab

3 ROC = SWIRLL Research Operations Center

4 ARMOR = Advanced Radar for Meteorological and Operational Research

\* Individual instruments can be requested in Line 5 of this table

Please continue on the following pages

**Please answer each question using Red font. Multi-line responses are okay.**

**A. User Information**

1. Lead Requestor(s):
2. Affiliation:
3. Contact Information:
4. Email:
5. Phone:
6. Other Requestors/Users, Affiliations, and Contact Information

**B. General Project Information**

1. Name of Project:
2. Dates of Proposed Field Campaign:
3. Location of Field Campaign (if applicable):
4. Is the field program nomadic (i.e., location of each platform will change from IOP to IOP) or does it have a fixed base (if fixed base, what is the location)?:
5. Funding Agency (funding source) for Facility Request:
6. Brief and general (one paragraph) description of the planned field campaign, including the general science goals.
7. Brief summary of other observational systems that will be used in the project, including those to be provided by the requestor. This will allow us to provide input on experimental design, *if needed,* by the requestor.

**C. Specific Request Information (complete all that apply)**

1. **MIPS and/or RaDAPS request**
2. Will you request both the MIPS and RaDAPS? (These are similar radar wind profiler based platforms. The primary difference is that the RaDAPS is smaller, more nimble, and rapidly deployable, while the MIPS may have more measurement capabilities depending on configuration. For example, the MIPS can be configured with the MoDLS Doppler lidar if a more comprehensive boundary layer profiling system is desired.).
3. MIPS/RaDAPS usage in the field. Check all that apply:

\_\_\_\_\_ Boundary layer measurements

\_\_\_\_\_ Precipitation measurements (UAH to insert reference here)

\_\_\_\_\_ Internal storm structure

\_\_\_\_\_ Other – please define

1. Is real-time data access at a remote location such as an operations center desired? Please describe.
2. Expected number of IOPs.
3. Duration of IOPs.
4. Narrative paragraph(s) describing how MIPS and/or RaDAPS will be used. Describe the specifics of the deployments. (Guiding questions: Will the MIPS or RaDAPS be placed at the same site for project duration? Different pre-scouted sites? How many pre-scouted sites need to be chosen? Will redeployments occur during the same IOP? Will sites be found on an ad hoc basis (“chasing mode”)?)
5. Is a UAH-assisted site survey requested? Will PIs provide assistance in locating pre-scouted sites? Describe.
6. If a fixed site is planned, will the PIs provide access to power at that site, or will generator power be required? If generator power is required, then continuous long-term operation exceeding a typical IOP duration of about 8-12 h is not possible.
7. Staffing
8. How many staff will project PIs provide? Will these be supported in whole or part by the project PIs? Describe what levels of staffing the PIs will provide.

Substantial cost savings and enhanced educational opportunities will be realized for cases in which the PIs provide staffing for MIPS and/or RaDAPS. The MIPS and RaDAPS systems can be operated by students with some training provided by UAH. Typically, two crew members per platform are required. UAH will provide training as needed. (*Please contact UAH to discuss staffing.)*

1. Do you require balloon-sounding support at the MIPS/RaDAPS sites? Hardware/software (IMET) can be provided as an option, or the PI can provide the sounding systems plus expendables (sonde packages and Helium)
2. Note: Normally UAH will provide a Field Manager who can assist with any problems that may arise.
3. **MoDLS request**
4. Will you request the MoDLS? (This can be a very nimble platform, with a Doppler lidar, 35-channel microwave radiometer, surface instrumentation, and balloon sounding capability. The Doppler lidar and radiometer can be requested separately as individual instruments.).
5. Is real-time data access at a remote location such as an operations center desired? Please describe.
6. Expected number of IOPs (specify if continuous).
7. Approximate duration of IOP(s).
8. Narrative paragraph(s) describing how MoDLS (instruments) will be used. Describe the specifics of the deployments. (Will the MoDLS be placed at the same location for the project duration? Different pre-scouted sites? How many pre-scouted sites need to be chosen? Will redeployments occur during IOPs? Will sites be found on an ad hoc basis (“chasing mode”)?) Please attach as a separate page.
9. MoDLS usage in the field. Check all that apply:

\_\_\_\_\_ Boundary layer measurements

\_\_\_\_\_ Precipitation measurements

\_\_\_\_\_ Cloud measurements

1. Is a UAH-assisted site survey requested? Will PIs provide assistance in locating pre-scouted sites? Describe.
2. If a fixed site is planned, will the PIs provide access to power at that site, or will generator power be required? If generator power is required, then continuous long-term operation exceeding a typical IOP duration of about 8-12 h is not possible.
3. Staffing
4. How many staff will project PI(s) provide for the MoDLS (or MoDLS instrument) operation? Will these be supported in whole or part by the project PIs? Describe what levels of staffing the PIs will provide.

Substantial cost savings and enhanced educational opportunities will be realized for cases in which the PIs provide staffing for MoDLS (or individual MoDLS instruments). The MoDLS system can be operated by students with training provided by MAPNet/UAH personnel. Typically, two crew members per platform are required for mobile operations involving radiosonde balloon launches. UAH will provide training as needed. (*Please contact UAH to discuss staffing.)*

1. Do you require balloon-sounding support at the MoDLS site? Hardware/software (IMET) can be provided as an option, or the PI can provide the sounding systems plus expendables (sonde packages and Helium).
2. Note: Normally UAH will provide a Field Manager who can assist with any problems that may arise.
3. **MAX radar request**
4. Will you request the MAX radar?
5. Is real-time data access at a remote location such as an operations center desired? Please describe.

Radar Usage in the field. Check all that apply:

\_\_\_\_\_ Precipitation measurements / QVAD profiling (UAH to insert reference here)

\_\_\_\_\_ Internal storm structure (PPI/RHI)

\_\_\_\_\_ VAD profiling

\_\_\_\_\_ Boundary layer (clear air) measurements

1. Expected number of IOPs.
2. Duration of IOPs.
3. Narrative paragraph(s) describing how MAX will be used. Describe the specifics of the deployments. (Will the MIPS be placed at the same site for project duration? Different pre-scouted sites? How many pre-scouted sites need to be chosen? Will redeployments occur during IOPs? Will sites be found on an ad hoc basis (“chasing mode”)?)
4. Is a UAH-assisted site survey requested?
5. Will special communications requests beyond cell phones and standard MAX VHF radio be needed?
6. Staffing
7. How many staff will project PIs provide for the MAX operation? Will these be supported in whole or part by the project PIs? Describe what levels of staffing the PIs will provide.

Substantial cost savings and enhanced educational opportunities flow from PIs providing MAX staffing. The MAX can be operated by students with very little training. Different types of deployments require different numbers of crew in each MAX. Typically, two crew are recommended. UAH will provide training as needed. (*Please contact UAH to discuss staffing.)*

1. Do you request a UAH Deployment Manager in the field to assist with MAX deployments, site selection, etc.? (This would typically be the case. The Field Manager can assist with any problems that may arise.)

**D. Any Additional Requests or Information (attach as necessary)**