

Section 2 Site arrival preparation list

General summary: it is difficult asking for basic supplies once on site. Best to have as many extra things on you as possible. It makes a smoother and more professional first impression arriving with a full repair kit. A lot of universities are less well stocked for basics than you'd expect.

Things to have while arriving at site:

Tools/kits

- Proper nephelometer mounting bracket (ideally one that won't scratch neph paint).
- Secondary (quartz HI mounting bracket)
- Two Screwdrivers (multi-head kinds)
- Exacto Knife/scissors (not for carry-on!)
- Three sets of hex keys (for neph, control box). Plan to leave one set behind
- Tape measurer or ruler
- Semi-permanent box or bag to hold all SPARTAN accessories and extra cartridges to be left at site (preferably bright in color with SPARTAN name visible).

Electronics

- Three extra SD memory cards
- LED flashlight
- Laptop to Ethernet adapter (i.e. for Mac Air)
- Laptop to VGA adapter (again, if needed)
- Banana plugs soldered to end of extension cord, i.e. for optional external 12V battery
- Battery charger
- Adjustable wrench
- Voltmeter
- Good quality power converter plug (not cheap travel-ready kind)

Consumable equipment

- Spare external flow adaptor
- Extra mineral oil (divided into small soap bottle vials)
- Nephelometer zero-air filter (for calibration)
- PM_{2.5} face mask (?)
- Extra screws for face plates of neph and control box
- Ziploc freezer bags (med and large)
- Bag of large and small zip ties (i.e. for Neph, loose cables, and sampler box pole support)

- Spare hose/tubing (for HI & pump, rotameters/flow adapter, and sampler)
- Extra metal pole support clamps
- Outdoor climbing-quality rope (you never know)
- Duct tape
- Clear tape
- Electrical tape
- Extra quartz and Teflon HI filters
- Extra control box pump (?). This would cost \$300 or so.
- Extra power cords (i.e. grey cord between neph and sampler and pump & control box)
- Makeshift shelter materials: metal bowls w bolts attached (assume they may not have all materials to cover neph)
- Extra gloves
- Extra Kimwipes

Information

- Abbreviated control box programming procedure for quick reference, such as what MetOne BAM has.
- Duty cycle program taped inside control box for quick ref.
- Exact instrument lat/long coordinates
- Emergency contact emails taped inside control box.
- List of colocated instruments and people who run them
- Before leaving, have someone copy some nephelometer and air sampling data in front of your, from the SD card to a computer. (i.e. to ensure they can do it without problems)

Extras

- Sufficient cash. Most sites would like us to pay for as much as possible. Do not assuming any "free rides" from sites. Be prepared to pay for any and everything. Even some hotels abroad do not take CC (i.e. at IIT Kanpur visitor's centre)
- Copies of letters of invitation (with contact names), MoUs, hotel names, and flight schedules
- Visas (business)
- Battery needs (Contact site ahead of time for details)
- Canadian gift to P.I./site crew (maple syrup, Halifax souvenirs)

Other preparations:

- Prepare for as many possibilities as possible, i.e. inconsistent power availability (Dhaka), monsoon (Kanpur, Manila, Bandung), no obvious place to mount instrument properly (may have to be creative here), getting sick or someone being unavailable at site (i.e. you, PI, or site crew).
- Be prepared for damaged, lost, or loosened connections for any/all

equipment (NB: nephelometer wiring comes loose).

- Practice explaining site prep/installation before leaving. Assume their English is not strong.
- Whatever seems reasonable time to stay at site (that is if things go right), consider adding at least another day. For instance, a 4-day stay at site could mean, after subtracting arrival and departure travel days, as little as 48 hours of useful site time.
- Prepared talk/presentation. Do not wifi will always be available.

More log sheets and info to be created for new sites:

- Explain sampling log sheets and when memory card information was last downloaded
- Take panoramic photos of SPARTAN sampling site, with **and** without persons in view of instrument.
- Ask directly (and more than once) who will be in charge of instrument.
- Keep track of full names and emails. NB: Person ultimately in charge often not the person you'd expect during pre-visit correspondence. Get headshot pictures of them.
- Stay enthusiastic about project! If you look uninterested they will be as well. (corollary: don't avoid mentioning how things may go wrong. I found it best to be honest about possible problems with instrument anticipate their possible issues)