Physical Properties Measurement System

This system is an automatic cryogenic station with a temperature range of 2K-350K (He4 insert) or 0.35K-300K (He3 refrigerator). It is equipped with a superconducting magnet of 14 Tesla and a rotator probe (He4 only).
The following modules are available:

1. DC resistance measurement
2. Heat Capacity
3. Vibration sample magnetometer

What should I do if I want to measure in this system?

1. Define your measurement if it is a one shot experiment we will do it for you.
2. If you need the system for a few measurements we will train you on the system, and you will need to buy your sample holder (which degrades with time)

A few FAQ's

1. Can I connect my external instruments? Yes, but you will need to write a short procedure in C++ so the instruments can communicate with the system. We are using Keithley delta mode Lock in amplifiers for precise resistivity and Hall measurements and Keithley DC amplifier to measure thermal transport and Nernst effect and we have a special probe for shining light on the samples at cryogenic temperatures and under vacuum.
2. How long will I wait in line? The schedule is set two weeks in advance. Usually you will get 2 days within two weeks.
3. How much will I pay? The Helium consumption is paid for separately ($5/ Litter, there is a He level meter in the machine, an overhead of 25% will be charged for He transfer and system cool down) In addition there is a charge of 4$ paid directly to the nanocenter (8$ if you do not have a nano-account)
4. Where is the system? In the Physics basement, Kaploon building 0013 (internal room)