Department of Physics
Bookings for PPMS facility

Date: 2 Nov 2022

1. General instructions about booking

   a) The user can book the PPMS facility for a maximum duration of 2 days.
   b) The measurement timing will be for 24 hours (Monday to Friday).
   c) Users are not allowed to change the new sample after 6 pm.
   d) The data will be sent to user at the e-mail ID provided by the user.
   e) To minimize the waiting time on PPMS, the change of VSM assembly to Hall-effect assembly, if needed, will be done on Monday.
   f) The faculty is requested to sign the requisition form after a minimum gap of 5 days from the end of the previous booking.
   g) The faculty should ensure that the online PPMS booking will be made only after the requisition is signed by the PPMS coordinator.
   h) User should acknowledge the facility utilization while preparing the MS by writing “PPMS EVERCOOL-II facility at IIT Delhi”

2. About the measurement

   a) The following measurements can be done employing PPMS facility:
      i. Magnetization vs. field, M-H (bulk & films),
      ii. Magnetization vs. temperature, M-T (bulk samples only),
      iii. Transport measurement (bulk & films).

   b) The PPMS lacks the required sensitivity to carry out the M-T measurement on films.
   c) Maximum field available is ~ 70 kOe. The temperature range is 2-380 K.
   d) For Hall effect, the current range is 0.1mA-2A @ 1Hz-1 kHz, & the sample resistance should be <100Ω (Maximum available compliance voltage is ~5V)
   e) Powder samples require pelletization at user’s end.
   f) The sample-size should be 3x4 mm² (max) for M-H & 5x5 mm² (min) for Hall Effect.
   g) For Hall effect measurements, the users are encouraged to take the responsibility for making contacts.

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