

NMR Newsletter v6

<http://nmr.chem.umn.edu> ← lots of good stuff here

New Spectrometers

Two new 400 MHz Bruker Avance III HD nanobay instruments were installed in May, with user training commencing in June of 2015. All new users are first trained on the AX-400. Access to all other Bruker instruments requires satisfactory completion of the NMR quiz.

AX-400 This spectrometer is equipped with a 60-slot SampleXpress autosampler. It is run in full automation mode. The probe is setup to run ^1H , ^{13}C , ^{19}F , and ^{31}P experiments.

AM-400 This spectrometer is run in full hands-on mode. The probe can be tuned to almost any NMR-active nucleus. Variable temperature is available.

Signal-to-Noise Comparison

Nucleus	HD-500 Prodigy	AV-500 BBO	AV-500 TBO	VI-500 HPX	AX/AM-400 BBO
^1H	2500:1	730:1	280:1	750:1	480:1
^{13}C	350:1	250:1	220:1	100:1	200:1
^{19}F	2000:1	550:1	220:1	n/a	500:1
^{31}P	n/a	180:1	140:1	n/a	150:1

New Hourly Rates Effective Oct 1, 2015

INSTRUMENT	Day (8 am - 8 pm)	Night/Weekend
HD-500	\$10.20	\$10.20
AV-500	\$10.20	\$5.10
VI-500	\$10.20	\$5.10
AM-400	\$9.00	\$4.50
AX-400	\$9.00	\$9.00
VI-300	\$8.10	\$8.10

Staffing Change

Reed Eisenhart joins us as a postdoctoral fellow. He is free to assist users with advanced NMR experiments such as DOSY, variable temperature, T1 experiments, water suppression, etc. Want to try a new experiment but don't want to be bogged down with excessive training and troubleshooting? Reed is available for research collaborations; bring him an idea and a sample and he will send you the processed and interpreted data! Are you trained on an instrument but need a refresher? Would you like a little help running a new experiment? Reed will host hands-on Bruker NMR refresher and help sessions each Tuesday from 10:30-11:30 or by appointment. Remember to bring your own sample!

Zachary Gilbert has now been promoted to senior TA, effective Jan 1st.