University of Wisconsin–Madison
Chemistry Department

Varian NMR User's Guide

by: Charles G. Fry

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Note: This guide provides an introduction to use of Varian equipment at the UWChemMRF. ***This guide is not intended in any way to be a replacement to the excellent Varian documentation!*** All students should refer regularly to the Varian VNMR Liquids Users Guide for learning and the Varian VNMR Command Reference Guide for specific guidance. All the Varian documentation is available in both hardcopy and on-line.

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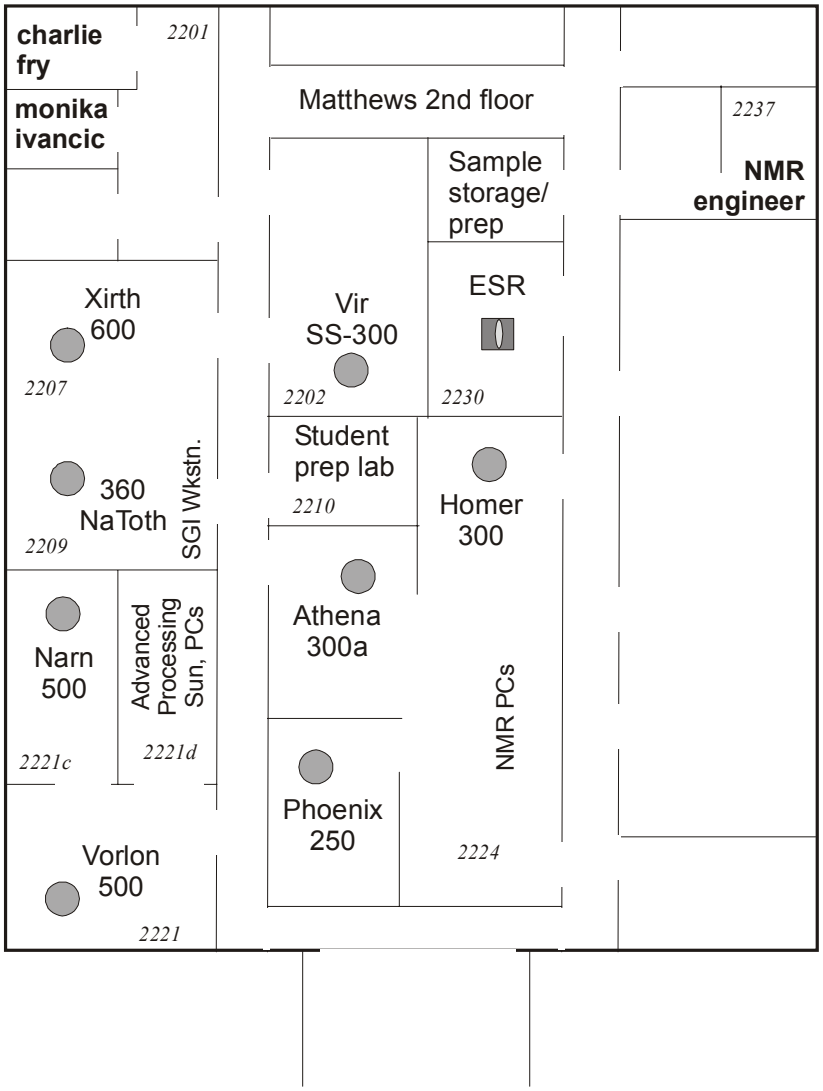
UW Chemistry Magnetic Resonance Facility (UWChemMRF)

I. Facility Layout (2nd floor Matthews)



As of Feb. 2003

ATHENA	–	AC+ 300	routine $^{1}H/^{19}F/^{31}P/^{13}C$	–	sample changer, quad-nucleus probe
HOMER	–	AC+ 300	routine $^{1}H/^{13}C$	–	$^{1}H/^{13}C$ dedicated
PHOENIX	–	AC+ 250	routine BB VT	–	routine BB ($^{29}Si/^{11}B/^{2}H/^{199}Hg$/etc.), variable temperature
VIR	–	UNITY-300	solid-state NMR	–	conformational, motions, solid-state packing, catalysts, amorphous and glassy compounds
NATOTH	–	Avance-360	non-routine BB VT	–	long-term VT, kinetics, concentration limited samples; 5 and 10 mm BB probes, 5 mm inverse probe

NARN	–	UNITY-500 non-routine ^{1}H/BB VT	–	high-sensitivity, sample-limited (^{1}H < 5 mg, ^{13}C < 15 mg), short-run, sophisticated experiments (e.g., HMQC, DQCOSY, gCOSY, gNOESY); limited access
VORLON	–	INOVA-500 inverse exps, 2D studies	–	long-term, sophisticated, gradient-enhanced experiments; combi-chem MAS probe; limited access
XIRTH	–	INOVA-600 long-term 2D studies	–	long-term, most sophisticated, gradient-enhanced experiments (e.g., NOESY/ ROESY, HMQC, DQCOSY); limited access
ESR	–	ESP-300 electron spin resonance	–	paramagnetism, free-radical chemistry

PC's – Six PC's are located in rm. 2224 for use in working up data. The PCs connect to a Win2000 server, which uploads data once per minute to a SNAP server, nmrsnap.chem.wisc.edu (128.104.70.79). The SNAP server can be mapped to PCs or Macs within the department, or accessed via IE or Netscape. See the facility director for more information

– All PCs have Acorn Software's NUTS 1D, H. Reich's WinDNMR, FTP and Zip software loaded. Some PCs have NUTS 2D Pro, ACDs HNMR and CNMR, gNMR, and Mestre-C software loaded on them.

Sun's – 3 to 4 Sun workstations are available for data workup in rms. 2207 and 2219A.

– NARN, VORLON, and XIRTH are hosts for the U500, I500 and I600 instruments, respectively.

– VNMR 6.1c, Felix95, NMRView, NMRPipe, and XEasy software are available on the Sun workstations.

SGIs – NATOTH (Avance host computer) and GQUAN (for off-line data workup)

II. Facility Personnel

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