


**To:** All PINMRF Bruker Users  
**From:** John Harwood (jharwood@purdue.edu)   
**Date:** October 29th, 2019  
**Subject:** New BBFO Probe Installed on DRX500-1 (367 WTHR)

We have completed the installation of a new BBFO probe on the DRX500-1 spectrometer. This new probe gives the DRX500-1 the same capabilities and approximate sensitivities as the AV-400 and DRX500-2 spectrometers. The DRX500-1 is available to qualified users immediately.

Spectrometer operators will need to use the "bbo" designation when loading PINMRF parameter sets, e.g., h1.bbo, c13.bbo, f19.bbo, hmqc.bbo, etc. The standard shim file is now "shims.bbo." In addition, the previous cryoprobe-specific commands such as cwobb, crpon and crplock are no longer used.

The new BBFO probe supports automated tuning. Therefore, when tuning the probe, use the **atma** or **atmm** commands in the same fashion as on our other Bruker TopSpin spectrometers.

If you are currently cleared to operate the DRX500-1 you may continue to use it without further interaction with PINMRF staff. If you were NOT previously cleared to use the DRX500-1 but did have access to our other Bruker TopSpin spectrometers, we should have already set up your iLab and host-computer access for the DRX500-1. However, we suggest that you schedule your first usage of the DRX500-1 during a time when PINMRF staff are available so that we may assist should any issues arise. Keep in mind that the DRX500-1 has an open schedule so you may reserve and use longer times (>30 minutes), during the daytime hours, than are permissible on the AV-400. Indeed, we encourage users to familiarize themselves with the DRX500-1 so that they may readily use it at times when the AV-400 is busy, e.g., during organic lab sessions.

We would like to acknowledge funding from Purdue's 2018 EVPRP-MMREP program for making possible the purchase of this new BBFO probe, and the efforts of Drs. Lance Ballard and Jason Clarke of Bruker with its installation.

If you have any questions or comments, please feel free to contact PINMRF staff.

cc: Prof. Alex Laskin  
Chemistry & MCMP Faculty (NMR-using groups)  
NMR Support Staff