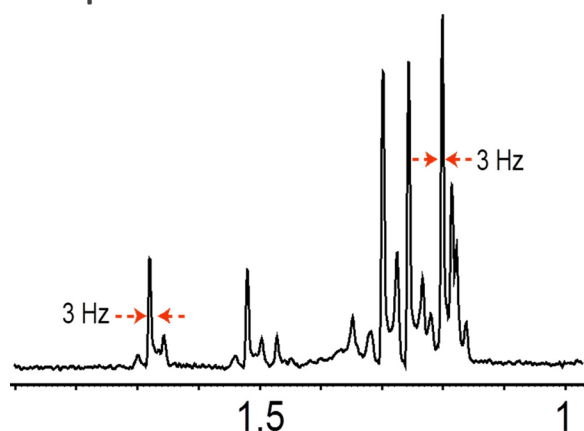


DEAR COLLEAGUE,

We were happy to see many of you at the ENC and ISMRM this spring, and are anticipating seeing some of you at Alpine in September.

For those who missed it, we introduced our new quad resonance, HXYZ, MAS probe at the ENC.

We are excited to offer the expanded capabilities of this new probe, including **3Hz ^1H linewidth on solid protein GB1.**



This ^1H spectrum was taken at 500 MHz with ^2H decoupling using our $^1\text{H}/\text{X}/\text{Y}/\text{Z}$ MAS probe.

Please see more details on the following page and on our website. www.dotynmr.com

(Also, check out our website blog about our total solar eclipse viewing at Doty Scientific.)

David and Judy Doty

UPCOMING CONFERENCES

10th Alpine Conf on Solid-State NMR

Sunday, 10th September, 2017

Chamonix-Mont Blanc, France

<http://www.alpine-conference.org>

SEMRC

Friday, 27th October, 2017

Tallahassee, Florida, USA

<https://nationalmaglab.org/news-events/events/for-scientists/south-east-magnetic-resonance-conference>

IN THIS ISSUE:

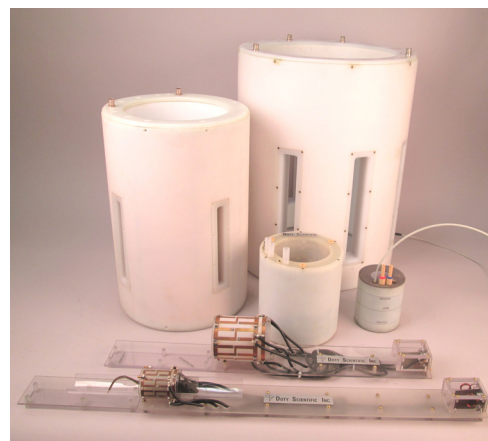
Large and Small MRI Coils

Dramatic Advance in NMR of Insoluble Proteins

using the new Doty QUAD-FAST-MAS H/X/Y/Z Probe for Quad Resonance MAS.

MAS-MAG Magic Angle Gradient Probe Results

LARGE and SMALL MRI COILS



Shielded ^1H and $^1\text{H}/^{13}\text{C}$ dual-frequency coils are available. Open platforms with removable shields are also available.

The following larger **3T** coils are available with quick delivery: [Click for more Info.](#)

- $^1\text{H}/^{13}\text{C}$ 27.5 cm dia x 26.5 cm lgth
- ^1H 18 cm dia x 18.5 cm lgth
- ^1H 16 cm dia x 18.5 cm lgth

RESONATOR TRIVIA: Doty introduced a 7 mm MAS probe in 1982. What “unheard of feat” was this probe capable of? It was quite a breakthrough - see www.dotynmr.com for help. First correct email response will win either a pair of Doty MAS turbine caps or a \$25 Amazon gift card. dmccree@dotynmr.com

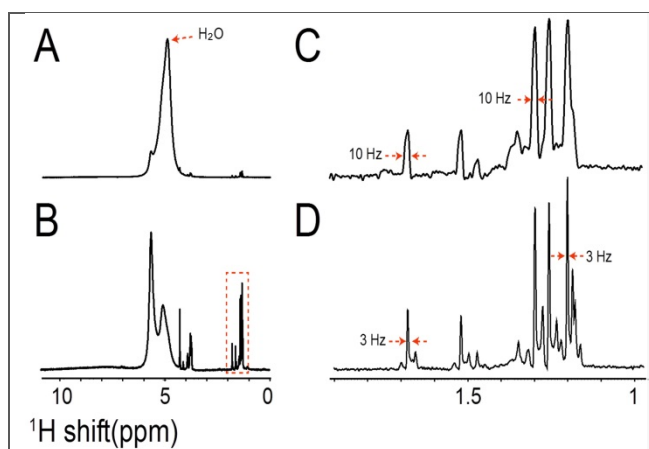
Doty Quad-Fast-MAS H/X/Y/Z or H-F/X/Y/Z HR-Solids



<http://dotynmr.com/products/quad-fast-mas-hxyz/>

- Solids Quad Resonance
- Four Independent, Efficient, High-Power Channels
- High resolution – 3 Hz ^1H
- ^2H decoupling
- Broadband H/X/Y/Z
- Fast-MAS 3 mm (1.3 mm coming)
- Extended VT range
- NB or WB, all fields
- Magic Angle Gradient (MAG) Coil (optional)

Did you know? Doty Scientific has been making Narrow Bore Broadband H/X/Y probes for 18 years. We introduced H/X/Y in the NB with our XC4 at 800 MHz in 1999. – Doty XC Cross Coil probes were Low E before anyone else thought about Low E probes. (Since 1997)



(A) Simple ^2H decoupled (10 kHz cw) ^1H spectrum. The peak at 5 ppm is residual water signal.

(B) Same as A, but water suppressed.

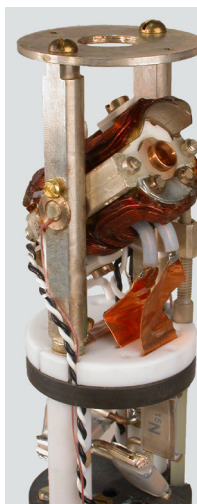
(C) & (D) The expanded region (red box in B) for methyl protons without and with ^2H decoupling, respectively. Linewidths at half maximum are shown in Hz. (Note the major linewidth reduction from 10-kHz ^2H decoupling at ~15 watts.)

Bibhuti Das and Paul Ellis, Doty Scientific, Inc., and Professor Leonard Mueller, Univ. of CA Riverside.

Acknowledgement:
NIH R43GM117905

MAS-MAG Low-E Inverse-Detected Applications

<http://dotynmr.com/products/magic-angle-gradient-probes/>



A Doty MAS-MAG (Magic Angle Gradient) Probe.

