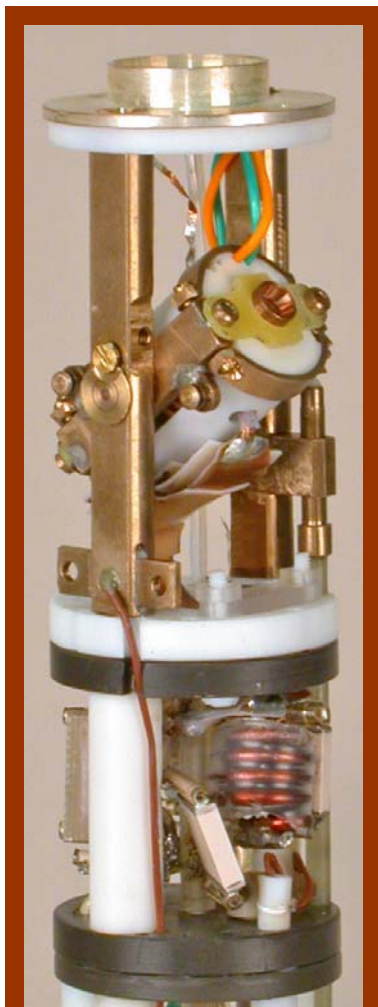


# Doty OptiMAS™ – Optimized for Demanding NMR

**Narrow bore only.  
Auto sample eject with drop in rotors.  
Cold zone cooled for increased sensitivity.  
Low E Field Sample Coils Since 2005**



**Doty OptiMAS™ Probe**

## **Spinning Options.**

**Now available – NEW DI3**  
(Drop In 3 mm)  
or DI4 (Drop In 4 mm) rotors

*... for best sensitivity.*

**Highest S/N –55% Gain in S/N**  
by cooling the cold zone and  
using cooled or low noise  
preamps.

*... for ease of use.*

**Automatic sample eject –**  
remove rotors without  
lowering the probe.

*... for high resolution MAS.*

**Optimal solids probe resolution**  
(1 Hz at 600 MHz).

*... for stable spinning.*

**Axial vibrations**  
**under 2 microns rms** at  
moderate speeds.

*... for thermally labile samples.*

**Order-of-magnitude lower**  
**decoupler heating**  
compared to solenoid only.

*... for multinuclear versatility.*

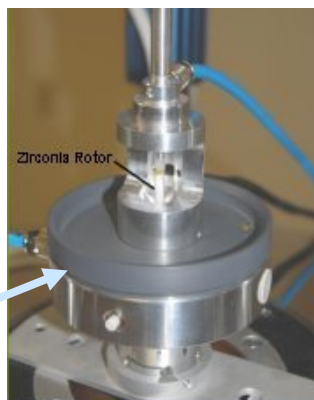
**Double-broadband**  
**X & Y channels.**

*... for homonuclear decoupling.*

**Minimal phase transients.**

# Doty OptiMAS™

## Automatic Sample Eject



## New OptiMAS™ Probe Spinning Options

- Auto Sample Eject with **DI-3** (Drop-In 3 mm) Spinner
- Auto Sample Eject with **DI-4** (Drop-In 4 mm) Spinner

## 55% Gain in S/N with Cooling in OptiMAS™ ... AND High Resolution

OptiMAS™ probe with DI-4 spinner and low noise (or cooled) preamps. Cooling the low-frequency and mid-frequency high voltage plug-in capacitors to 100 K with nitrogen provides major improvement in signal to noise. "Cold Zone" cooling contributed 42% and cooled preamps contributed 13% to the gain in S/N.

OptiMAS™ Probe Glycine CP/MAS Spectra 70 kHz decoupling, <sup>1</sup> H at 300 MHz		OptiMAS™ <sup>1</sup> H Resolution Spectrum at 300 MHz
A: "cold zone" at RT System NF = 1.1 dB	B: "cold zone" at -180°C System NF = 0.7 dB. Gain in S/N = 55%	Water Spectrum FWHM = 0.6 Hz, 8 Scans