

## **DSG – HDice Meeting Agenda**

**Date: August 20, 2020**

**Time: 2:00PM**

BlueJeans Link: <https://bluejeans.com/468969846>

### 1. Discuss change to lock-in amplifier X and Y scaling

$$S_x = \frac{R - R_{0bkgd}}{R_{bkgd}} R_{0bkgd} \cos(\phi - \phi_0)$$

$$S_y = \frac{R - R_{0bkgd}}{R_{bkgd}} R_{0bkgd} \sin(\phi - \phi_0)$$

$R$  = Amplitude measurement at frequency  $f$

$R_{0bkgd}$  = Absolute maximum amplitude of background data

$R_{bkgd}$  = Background amplitude measurement at frequency  $f$

$\phi$  = Phase measurement at frequency  $f$

$\phi_0$  = Phase of background data at  $R_{0bkgd}$

### 2. Discuss requirements of new NMR program using Zurich lock-in amplifier

#### 2.1. What features from fsNMR should be added

##### 2.1.1. Averaging, background subtraction, scaling, data logging?

### 3. Discuss availability of PCs in NMR rack PCs for fsNMR development

#### 3.1. PC needed for development and debug of new requested fsNMR features

#### 3.2. Previously used development PC in NMR rack 2 in use for tests

### 4. Additional items