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close all;
clear all;

load('table.mat')
load('err.mat')
X = table(:,1)*10;
Y = table(:,2);
Z = table(:,3);
err0 = err(:,1);
figure;
F.Method = 'natural';
F.ExtrapolationMethod = 'nearest';
F = scatteredInterpolant(X,Y,Z);
ti = 0:1:85;
tj = 0:1:530;
[qx,qy] = meshgrid(ti,tj);
qz = F(qx,qy);
mesh(qx,qy,qz);
hold on;
plot3(X,Y,Z,'k*'); hold on;
plot3([X,X],[Y,Y],[-err0, err0]+'Z', '-r');
xlabel('x [mm]'); ylabel('s [mm]'); zlabel('Voltage pp (V)')
grid on;
title('NMR @ 45 mT')

figure;
Z = table(:,4);
err1 = err(:,2);
F.Method = 'natural';
F.ExtrapolationMethod = 'nearest';
F = scatteredInterpolant(X,Y,Z);
ti = 0:1:85;
tj = 0:1:530;
[qx,qy] = meshgrid(ti,tj);
qz = F(qx,qy);
mesh(qx,qy,qz);
hold on;
plot3(X,Y,Z,'k*'); hold on;
plot3([X,X],[Y,Y],[-err1, err1]+'Z', '-r');
xlabel('x [mm]'); ylabel('s [mm]'); zlabel('Voltage pp (V)')
grid on;
title('NMR @ 340 mT')

figure;
Z = table(:,5);
err2 = err(:,3);
F.Method = 'natural';
F.ExtrapolationMethod = 'nearest';
F = scatteredInterpolant(X,Y,Z);
ti = 0:1:85;
tj = 0:1:530;
[qx,qy] = meshgrid(ti,tj);
qz = F(qx,qy);
mesh(qx,qy,qz);
hold on;
plot3(X,Y,Z,'k*'); hold on;
plot3([X,X],[Y,Y],[-err2, err2]+'Z', '-r');

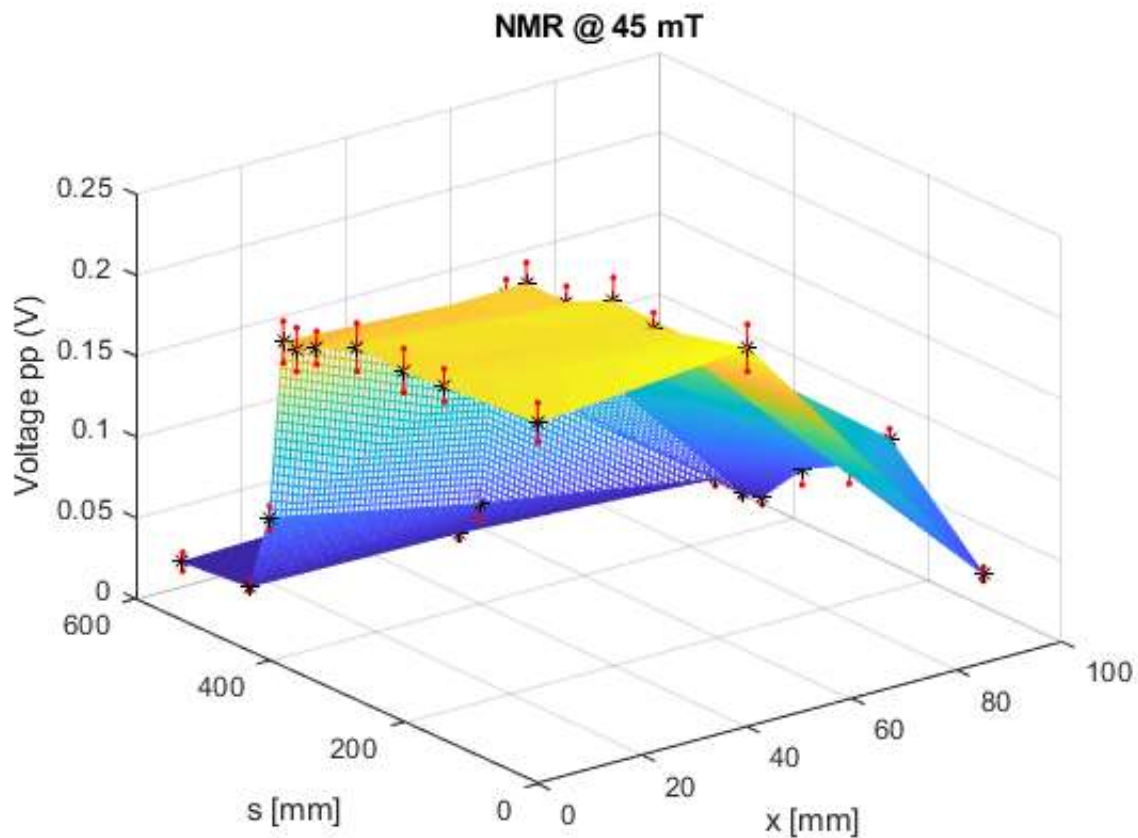
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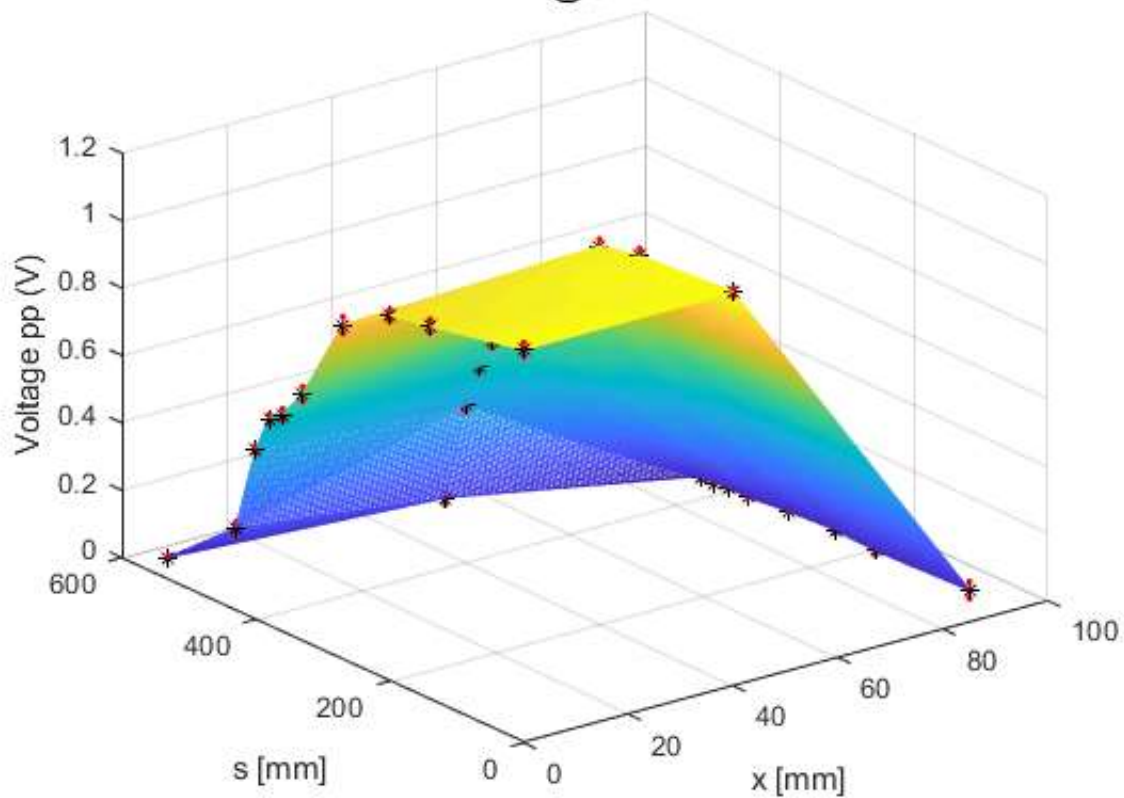
xlabel('x [mm]'); ylabel('s [mm]'); zlabel('Voltage pp (V)')
grid on;
title('FMR @ 45 mT')

figure;
Z = table(:,6);
err3 = err(:,4);
F.Method = 'natural';
F.ExtrapolationMethod = 'nearest';
F = scatteredInterpolant(X,Y,Z);
ti = 0:1:85;
tj = 0:1:530;
[qx,qy] = meshgrid(ti,tj);
qz = F(qx,qy);
mesh(qx,qy,qz);
hold on;
plot3(X,Y,Z,'k*'); hold on;
plot3([X,X],[Y,Y],[-err3, err3]+'Z' ,'.-r');
xlabel('x [mm]'); ylabel('s [mm]'); zlabel('Voltage pp (V)')
grid on;
title('FMR @ 340 mT')

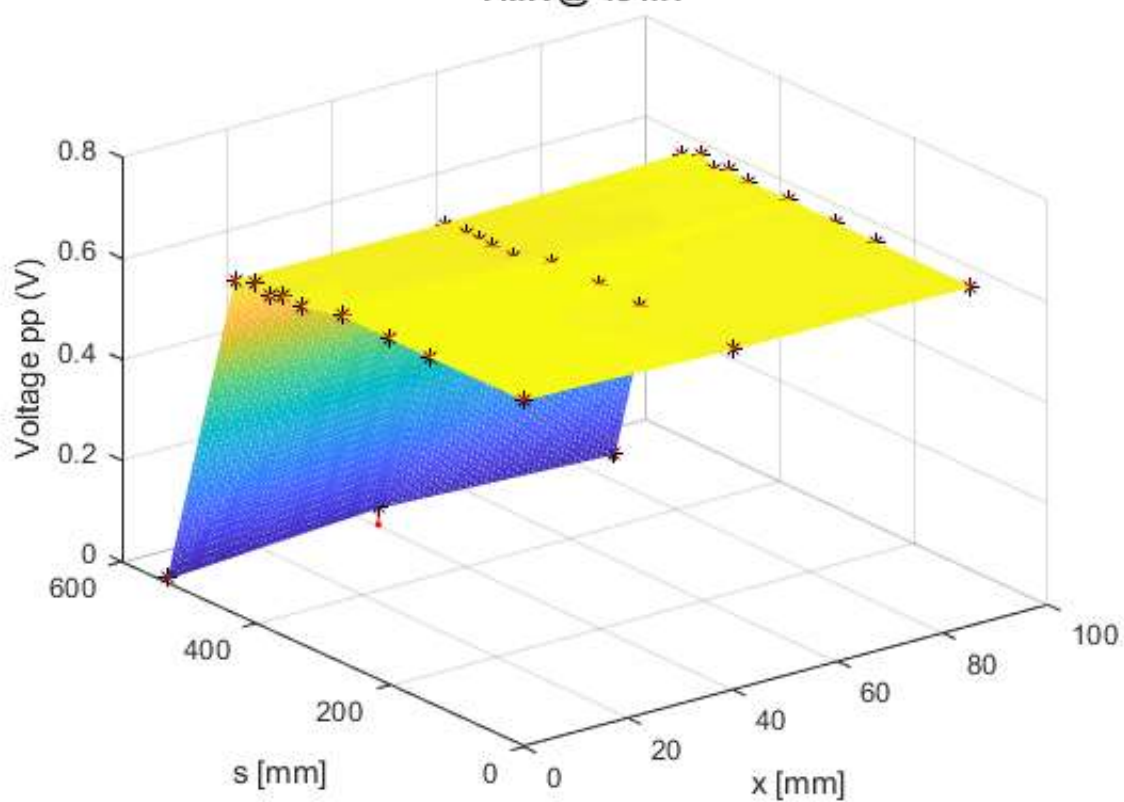
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NMR @ 340 mT



FMR @ 45 mT



FMR @ 340 mT

