

Re: Gaseous oxygen magnetic behaviour...

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"Fred_Bartoli" <fred.removethis.bartoli.canxxxelthis@xxxxxxxxxxxxxxxxxxxxxxxx>
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Hello,

I've a very sensitive experiment in which an air coil is the pickup sensor. We have an unexplained residual error and after carefully eliminating all the possible causes, the obvious and less obvious ones, we finally found the cause was "in" the pickup coil itself. There's no doubt about this now.

Some more experiments led us to one hypothesis where the air oxygen which, is paramagnetic, interacts with the system and I'm now trying to put some figures on this hypothesis.

My pb is that I don't know how to work out magnetic problems with gases and I don't find much information on web.

I can't say much on the system but our hypothesis has to do with linearity of the medium (air) and saturation.

Any hint on how to tackle this is welcomed.

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Thanks,
Fred.

Magnetic properties are non-linear. Google "hysteresis".
<http://www.ndt-ed.org/EducationResources/CommunityCollege/MagParticle/Physics/HysteresisLoop.htm>