



# An Inconvenient Truth

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**TRUTH:MAGNETIC FIELD IS  
NEVER STABLE IN A WARMER  
ENVIROMENT**

## An Inconvenient Truth:

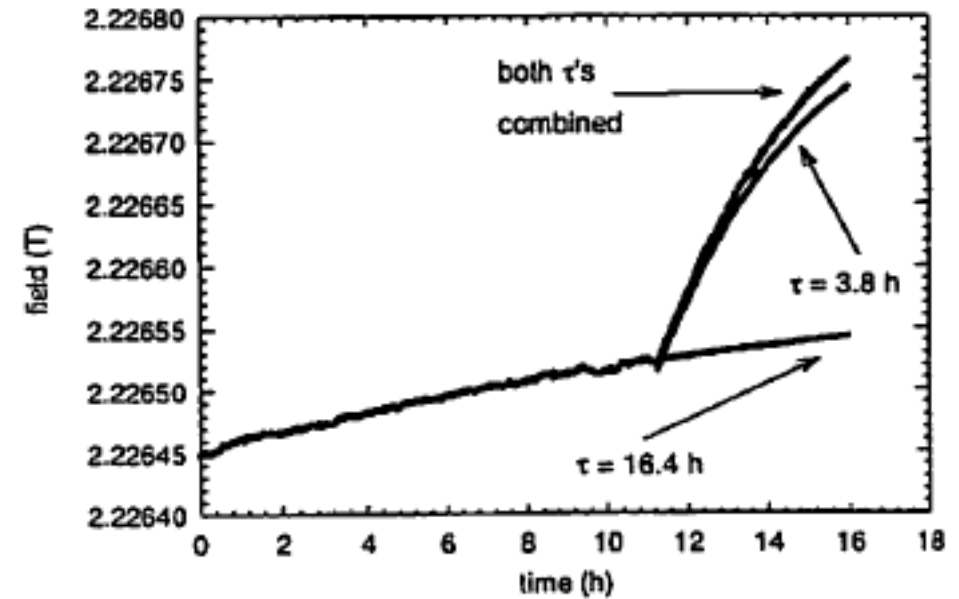
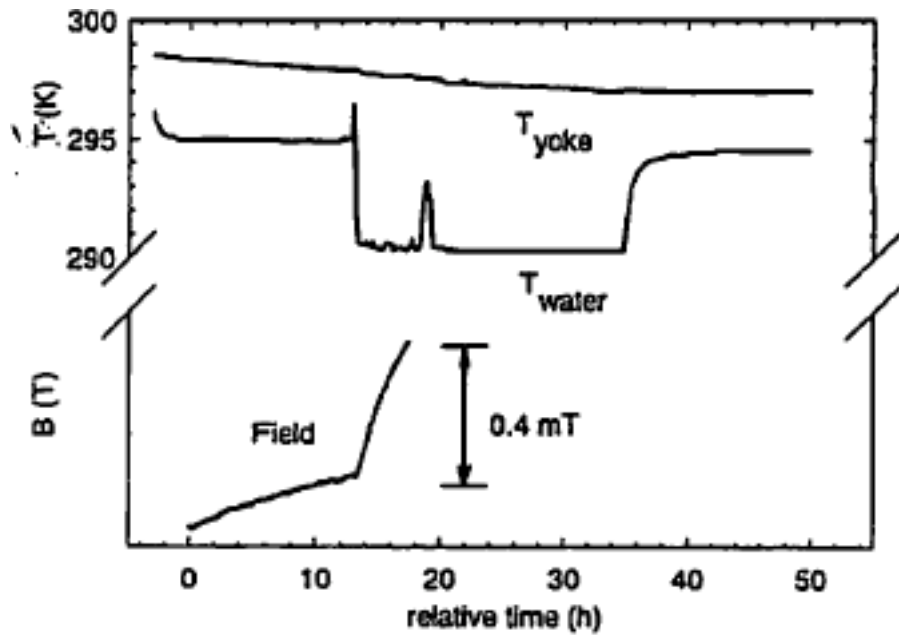
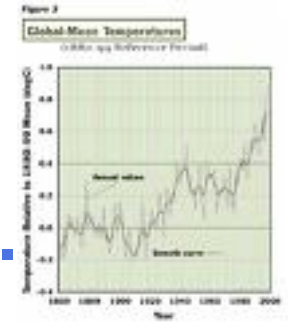
At a level of tens of ppm, Magnetic field of Dipole, Quadrupole and other multipole magnets having magnetic material is never stable even under a perfect specified current. It is the same with perfect permanent magnet. This is because magnetic property comes from SPIN and a direction of SPIN depends upon temperature and its previous condition(hysteresis).,



There is a way to get rid of this.

**UNLESS MAGNETS ARE AT ABSOLUTE ZERO TEMPERATURE  
OR AT THE ICE AGE**

# An Inconvenient Truth: cyclotron magnetic field has been know to drift.

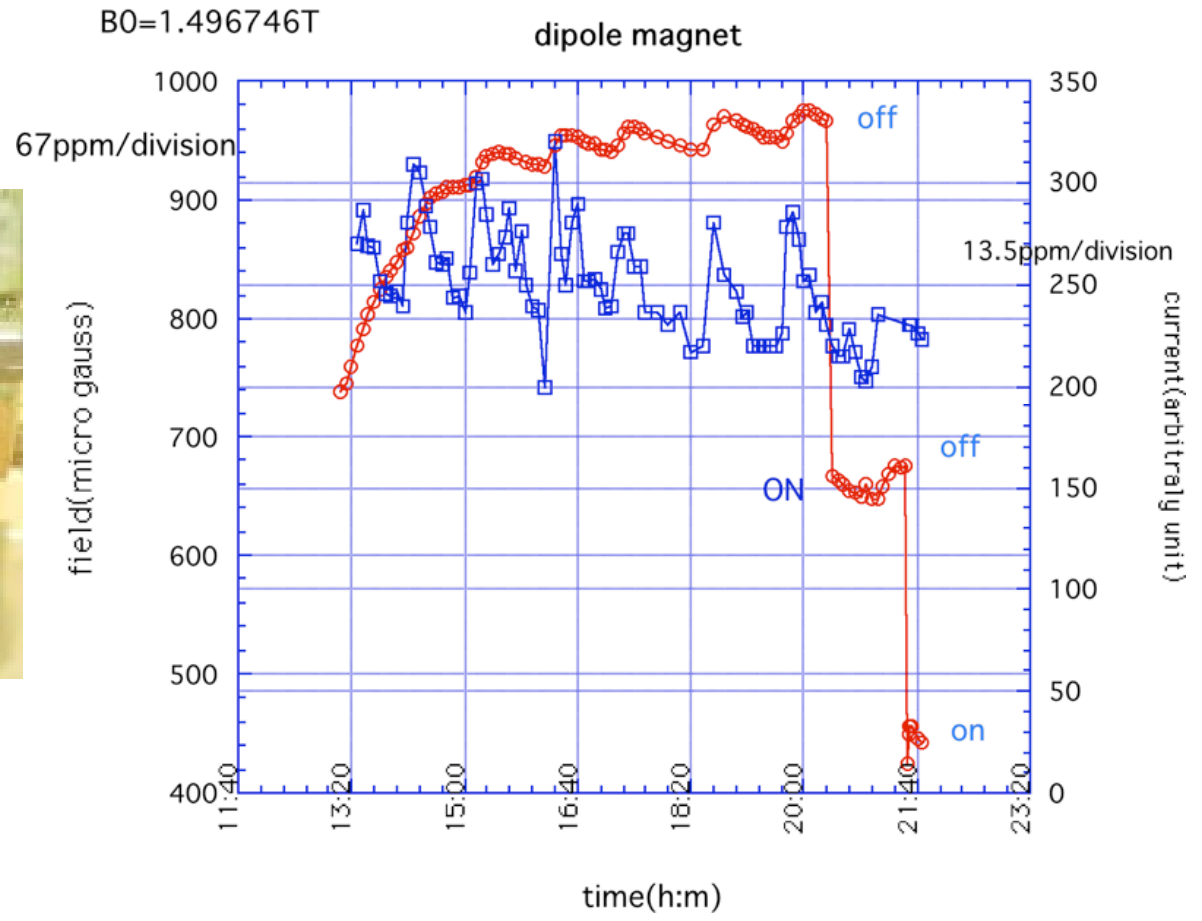


## DRIFT IN NETHERLAND

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M.Kumada

# An Inconvenient Truth: Beamline dipole also drifts even with expensive

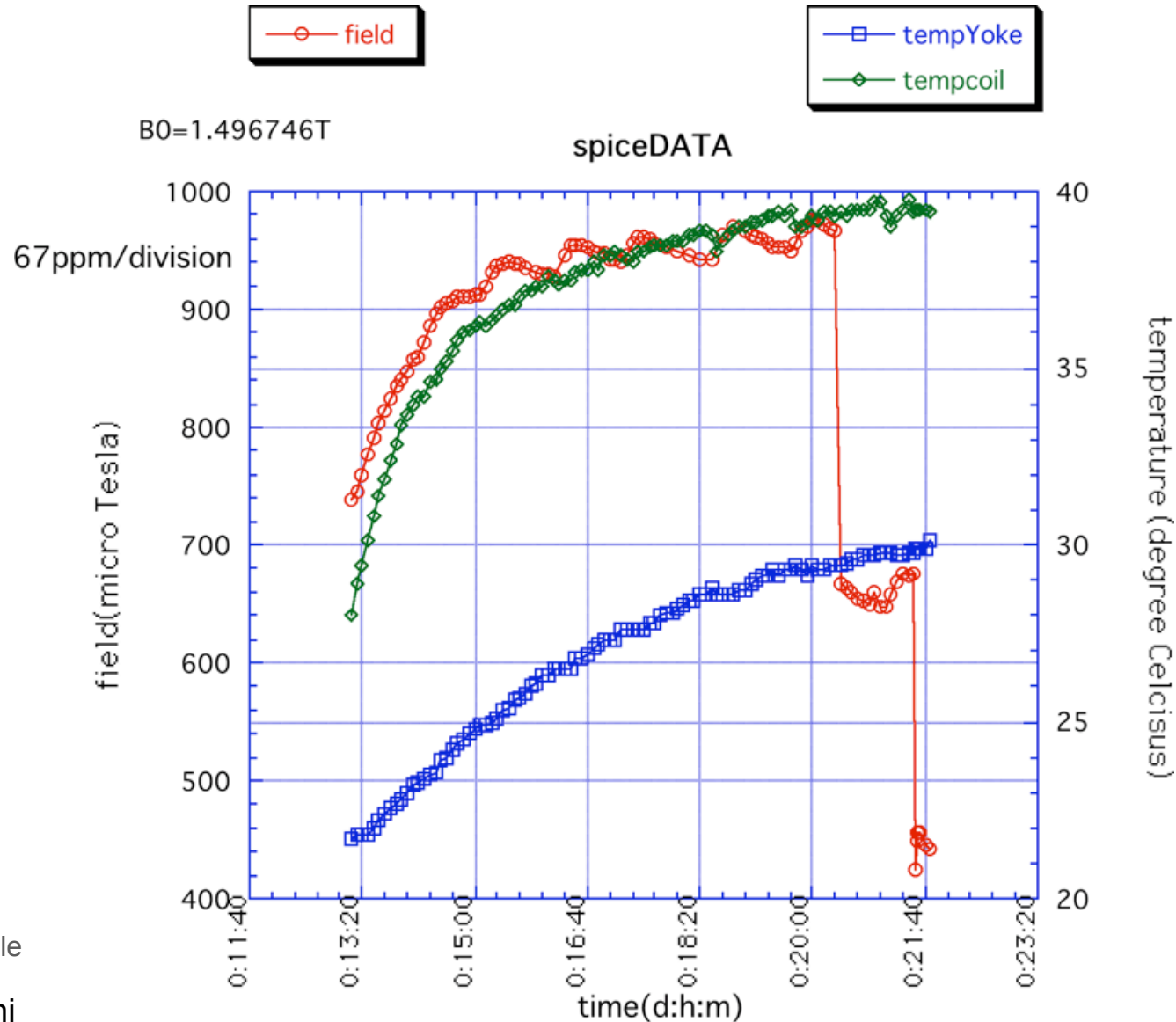


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## TRUTH: MAGNETIC FIELD IS NEVER STAB

# An Inconvenient Truth: Beamline dipole also drifts even with expensive power supply



Beamline diode

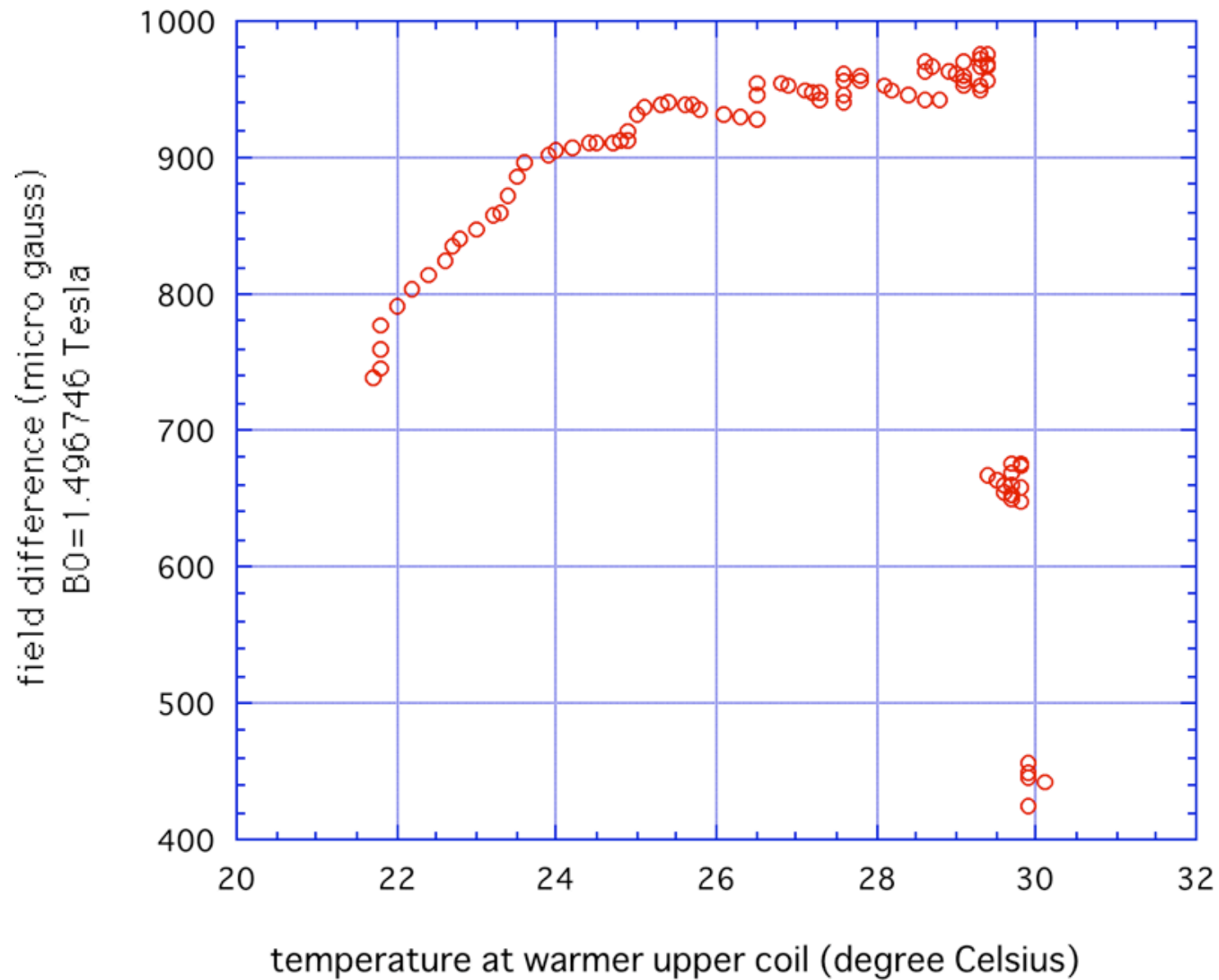
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○ field

dipole magnet

More dipole

Bfield vs TempYoke



# summary

At a level of tens of ppm, you may not need such accuracy at the moment.

When the time of your need of such accuracy of dipole or quadrupole, just call 911 or me.

Till that time Bryan's high quality HA Power supply can do your Job.

