

## **Molecules:**

Ben Sauer, YbF:

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Information concerning your project:

- Search for .e.-EDM using YbF system. [Nature **473**(7348):493-496 26 May 2011]

- name and email address of contact persons / spokespersons:

Ed Hinds: [ed.hinds@imperial.ac.uk](mailto:ed.hinds@imperial.ac.uk)

Ben Sauer: [ben.sauer@imperial.ac.uk](mailto:ben.sauer@imperial.ac.uk)

- collaborating partners:

none

- website: <http://www.imperial.ac.uk/ccm/research/edm>

- link to a recent talk:

- specific features (some keywords):

YbF molecular beam, 3K supersonic source, laser-radiofrequency double resonance spectroscopy, multichannel phase sensitive detection to monitor experimental parameters.

- major challenges (some keywords):

Reversibility of the 14kV/cm electric field to better than 0.5V/cm. Other than that, it appears that in the near future the experiment will be limited by counting statistics.

- schedule, aimed at sensitivity and timeline for results:

Our goal from our latest round of funding is to improve our recent measurement by a factor of 20, at least to  $4e-29$  e.cm:

<http://gow.epsrc.ac.uk/NGBOViewGrant.aspx?GrantRef=EP/J011401/1>

We are taking good quality data now and hope to improve by about a factor of three this year.

This grant runs to March 2016. We are thinking of a YbF fountain experiment which would have even greater sensitivity, but this is still speculative.

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