

# IS THERE AN OBLIQUE MAGNETIC ROTATOR INSIDE THE SUN?\*

*(Invited Review, Abstract)*

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**Abstract.** The size of the rotational splitting recently observed (Claverie *et al.*, 1981) is correlated with the  $12.2^{\text{d}}$  variation in the measurements of solar oblateness observed by Dicke (1976) and implies a convection zone of depth of  $0.1 R_{\odot}$ . The near equality of amplitudes of global velocity oscillations (Claverie *et al.*, 1981) of the various  $m$  components of the  $l = 1$  and  $l = 2$  modes as seen from the Earth viewing the Sun nearly along the equator is unexpected for pure rotational splitting. It is suggested that a magnetic perturbation is present and an oblique asymmetric magnetic rotator with magnetic fields of a few million gauss is responsible. A more detailed account was submitted to *Nature*.

## References

- Claverie, A., Isaac, G. R., McLeod, C. P., van der Raay, H. B., and Roca Cortes, T.: 1981, *Nature* **292**, 443.  
Dicke, R. H.: *Solar Phys.* **47**, 475.

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