Bruins *et al.* Reply: The accuracy of our result on G_M^n reported in [1–3] depends on the accuracy in the measurement of the neutron detection efficiency in the reaction $D(e, e'n)$. The latter was measured *in situ* using pion photoproduction on hydrogen, by which neutrons are tagged unambiguously. In the competing pion electroproduction process, the reaction is not kinematically defined by a measurement of the pion momentum only. If this is not taken into account, the cross section of $D(e, e'n)$, and consequently G_M^n, will be overestimated.

We have considered the contribution of pion electroproduction and concluded that the flux of virtual photons predominantly results from small angle scattering and is strongly forward oriented. The contribution of longitudinally polarized photons is negligible within this so-called peaking approximation (PA). The PA has been worked out by Dalitz and Yennie [6] to describe $^1H(e, e'\pi)$ at 600 MeV. It has been widely used close to the end point of the virtual photon spectrum. A quantitative calculation by Tiator and Wright [7] confirmed this concept. Schmitt *et al.* [8] made a further critical and precise test by measuring $^1H(e, e'\pi)$ in the Delta region and found very good agreement. Based on this and other work, the PA is *generally* considered to be accurate in at least the highest 10% of the photon energy spectrum, which we used in our experiment. Until now, there has been no obvious reason to challenge the use of the concept of the PA in our work.

Jourdan *et al.* [4] argue that the fraction of pion electroproduction at large electron scattering angles is important implying a substantial deviation of the PA. Their criticism is based on a Monte Carlo simulation using data [5] taken at 3 and 7 GeV, and at much higher momentum transfers as compared to our work. This implies an invalidation of the PA based on an extrapolation over a large kinematical range.

Jourdan *et al.* claim that Brauel's kinematics are similar to ours, whereas Schmitt's kinematics would require a large extrapolation. Just the opposite is the case: (i) We are more conservative than Schmitt *et al.* concerning the part of the photon spectrum used, and (ii) an extrapolation from Brauel's kinematics to the one used by us covers a range in which the data themselves suggest strong variations of the different structure functions. Specifically, the data reveal a *rising* longitudinal strength the closer they are to the photon point, where it must, by definition, vanish. This implies a large uncertainty of the longitudinal contribution and renders the estimate of the cross section very vulnerable. Still, we have reestimated the quantity η_{miss}, defined by Jourdan *et al.*, using the Monte Carlo code ENIGMA [9], based on the formalism of Dressler [10]. The result is that the overwhelming majority of the neutrons is in the direction of the neutron detector, justifying our results.

We are convinced that the PA, which has been shown to be numerically correct at higher and at lower energies, also holds in the regime where we applied it, and has more credits to it than an extrapolation of data into an unmeasured kinematical region. But, in the absence of reliable data, we cannot establish beyond any doubt whether Jourdan's criticism is correct or not. Since our data on G_M^n are the most accurate ones available over a wide kinematic range, we feel it is our duty to overcome the deadlock of the present situation. We will, therefore, *measure* the cross sections of the reactions $^1H(e, e'\pi)n$ and $^1H(\gamma, \pi)n$ using identical kinematics as in our experiment, and therewith verify the assumptions which underlie our published results.

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[1] E. E. W. Bruins, *et al.*, Phys. Rev. Lett. **75**, 21 (1995).
[2] H. Reike, Ph.D. thesis, Universität Bonn (1993).
[3] E. E. W. Bruins, Ph.D. thesis, Universiteit Utrecht (1995).
[4] J. Jourdan, I. Sick, and J. Zhao, preceding Comment, Phys. Rev. Lett. **79**, 5186 (1997).
[5] P. Brauel, *et al.*, Z. Phys. C **3**, 101 (1979).
[6] R. H. Dalitz and D. R. Yennie, Phys. Rev. **105**, 1598 (1957).
[7] L. Tiator and L. E. Wright, Nucl. Phys. **A379**, 407 (1982).
[8] Ch. Schmitt, *et al.*, Nucl. Phys. **A392**, 345 (1983).
[9] J. L. Visschers, in *MC93*, edited by P. Dragovitsch, S. L. Linn and M. Burbank, (World Scientific, 1994), p. 350.
[10] E. T. Dressler, Can. J. Phys. **66**, 279 (1988).

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