**Casini *et al.* Reply:** The preceding Comment by Chattopadhyay [1] to our Letter [2] does not question the analysis of the experimental data and the relevance of the obtained result, but states that we invoke "an erroneous view about the theoretical understanding of the observed facts." Further, the Comment states that our experimental findings can be reconciled with existing models of stochastic exchange of single nucleons, based on the agreement between calculations [3] and experimental results for the reactions Fe, Ge + Ho at 8.5*A* MeV.

It is clear that, in the frame of models based on the stochastic exchange of single nucleons, one may produce correlations similar to those observed experimentally. But, in our opinion, it is not so clear whether, with increasing bombarding energy, (a) the data continue to support the picture of incoherent exchange of single nucleons, not only qualitatively but also quantitatively, or (b) other mechanisms of a different nature have to be included, their relevance becoming more compelling with increasing bombarding energy.

Allowing enough interaction time, the energy partition driven by nucleon exchanges should tend towards an equilibrium condition. Namely, the average partition should approach the "equal temperature" limit (this behavior was indeed seen in many systems), and the two correlations between excitation energy and net mass transfer should become flatter (merging eventually into a single correlation at equilibrium). For example, a flattening of the correlation for projectilelike fragments was found in the system $^{74}$Ge + $^{165}$Ho at 8.5*A* MeV (both in the original [4] and in the revised analysis [5]) and reproduced by the nucleon exchange calculations performed by the author of the Comment (see Fig. 4 of Ref. [3]).

In our case, the average energy partition (quantity $C$ of our Letter) shows the expected trend, while the excess of excitation energy associated with the net mass transfer in our opinion does not. In fact the quantity $R$ decreases, but not fast enough, so that $R \times$ TKEL is nearly constant. We remind the reader that, because of the linear behavior of our correlations, the product $R \times$ TKEL is proportional to the slope of the correlations, independent of mass asymmetry [see Eq. (4) of our Letter]. We understand that the author of the Comment, considering the symmetric exit channel, states that there are two contributions, one ($E^{\mathrm{win}}$) decreasing and the other ($E^{\mathrm{wall}}$) increasing with increasing total kinetic energy losses (TKEL), which could qualitatively reproduce the observed effect, at least at symmetry. In our opinion, to reconcile our results with a nucleon exchange picture, it has to be shown quantitatively that the interplay between the two contributions gives indeed a linear correlation, such as the one observed experimentally, and also the correct TKEL dependence.

Moreover, the nucleon exchange mechanism has the general tendency to underestimate the experimental mass variances at large energy losses. At low bombarding energies, this statement is based on many comparisons of experimental data with the nucleon exchange model (NEM) by Randrup (see, e.g., Fig. 6 of Ref. [6]), as well as on the comparison (Ni + U at 8.5*A* MeV) with the nucleon exchange calculations [7] of the author of the Comment, with and without trajectory fluctuations. In our Letter we stressed the "very rapid increase of $\sigma_A^2$ with TKEL" (which is reasonably well described by the empirical parametrization of Ref. [8], but underpredicted by NEM) and the need to reconcile it "with a smaller number of exchanges," but we could not go into more details because of the space limitations of the Letter format.

Furthermore, we recall that a quantity [Eq. (3) of Ref. [5]] was proposed as an experimental estimator of the asymmetry between the excitation energies generated in the acceptor and donor fragments in one nucleon exchange. While in the Ge + Ho reaction at 8.5*A* MeV, a value corresponding to a reasonable two-to-one partition in favor of the acceptor nucleus was found [5], in our case this estimator rapidly rises with TKEL to values much greater than 1.0, thus preventing it from being interpreted as an excitation energy asymmetry. With all due caution, the failure of this estimator in our case may point to a qualitative difference with respect to the more asymmetric and less energetic Ge + Ho system.

In our opinion, these facts cast doubts on the ability of existing single-nucleon stochastic exchange models to give a consistent description of several aspects of dissipative collisions. The results of specific calculations for our systems (able to quantitatively reproduce the experimental mass variances and the observed correlations between excitation energy and net mass transfer) would be desirable to remove these doubts and to clarify the subject.

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