

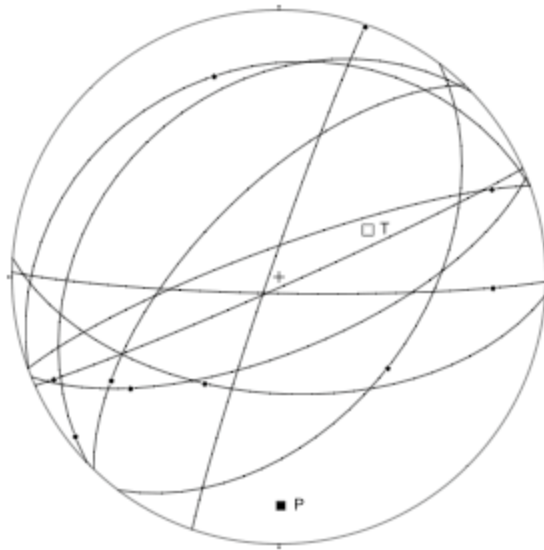
## Author Comments

For the purpose of this discussion, we first wish to thank Ernest Rutter for his thoughtful comments, to which we should like to reply as follows.

E.H. Rutter addresses the data shown in our Fig. 2a, which we refer to as the locality of the fault gouges near Lorca, and interpreted by Rutter as being presumably in the rambla by the Lorca brickworks, an exposure previously studied by Rutter et al. (1986). Personal communication about that locality, some 2 km SW of Lorca, however, indicates that the exposures studied by us are 5 to 6 km further NE along-strike of the Alhama de Murcia Fault, NE of Lorca.

Turning now to Rutter's comments, the data reported by Rutter et al. (1986) do differ from our data, those from Rutter et al. (1986) showing clear evidence for genuine strike-slip motion. This is less obvious in our Fig. 2a where lineations, indeed representing slickenlines on Y shears, are in part clearly plunging. As compared with the data reported in Rutter et al. (1986; their Fig. 11), the amount of our data is unfortunately limited, nor did we systematically record paired R and P shears to an extent such as to allow a similar analysis. On the other hand, a small number of hitherto unpublished striated fault plane data from the area of the gouges yields a result shown in the appended figure. The kinematic picture is similar to that of our Fig. 2b of the basement-basin contact about 4 km further NE along-strike of the Alhama de Murcia Fault Zone, with an about NS directed P axis and a moderately to steep E-plunging T axis. These principal displacement axes (indeed not stress axes), however, are again based on a small number of data, and we feel that given its earthquake potential it would be worthwhile to study the fault kinematics of the Alhama de Murcia Fault Zone in much more detail and to collect significantly larger datasets that do allow a much larger degree of precision than possible with our current dataset.

We strongly endorse the view, expressed by Rutter, that exposed fault kinematics relies on features that once in the past developed at some depth, such that the relationship with the kinematics of earthquake motion may become less clear. This could also explain the somewhat different kinematics in the gouge exposures studied by Rutter et al. (1986) and those documented here, as the two localities are separated by an approximate distance of 2 km along-strike of the fault zone and may well have undergone a slightly different exhumation history.



Striated fault planes in fault gouge area NE of Lorca.