

B 33-3P3
Vienna, 3rd May 1956

Letter from
W. Israel enclosed
Dear Sygne, ^{6/5/56}

Many thanks for your good letter of 25th April.
I have not yet got your books at hand, indeed I have
nothing at hand except what we have in the four
suitcases (and a few pieces) - and no chance of
getting at anything (though it has all arrived safely)
before we get a house or a flat - and this seems
to be particularly difficult at the moment on account
of a preposterous change in the law, dating from
1st January 1956. - But we are now making attempts
at 'the top levels', viz. Ministry of Education and
the Mayor of Vienna (who is giving me a price on
the 5th inst., great honour and worth about £140 or
six weeks bed and breakfast in our present hotel
quarters. -

Now, as regards the criticism of your reviewer,
I am quite at a loss to understand it. A Lorentz tr.
is after all a rotation in x, y, z , i.e., and a
4-dimensional rotation amounts to a pair of rotations
in two completely orthogonal planes (2-spaces). So I dare
stake anything you like on your statement being quite
correct. The proof ought not to be long and tedious.
However just as I am writing this, I do remember
something about an exceptional case. I try to recollect
it. A rotation is given (essentially) by an antisymmetric
tensor f_{ik} . This can usually be reduced (by change
of frame) to

$$\begin{matrix} 0 & f_{12} & 0 & 0 \\ -f_{12} & 0 & 0 & 0 \\ 0 & 0 & 0 & f_{34} \\ 0 & 0 & -f_{34} & 0 \end{matrix}$$

But there is an exception, viz. when
both invariants vanish. For this
would require, that after reduction
 $f_{12} f_{34} = 0$ $f_{12}^2 \pm f_{34}^2 = 0$,
hence $f_{12} = f_{34} = 0$ which cannot be.

