Mathematisches Institut
Universität Heidelberg
April 17
(Year not written in letter.)

Dear Bill,

Thanks for your letter. I would still like to ask you a few questions about the definitions in my two earlier letters. Perhaps you have the technique to answer them.

(i) To what extent can you show that over $\mathbb{C}$ each of the sets $\Pi_{\{\varphi\}}(G)$ consists of a single element (Zhelobenko!)?

(ii) To what extent is a true and to what extent can you show that when $G = \mathrm{GL}(n)$ each of the sets $\Pi_{\{\varphi\}}(G)$ consists of a single element?

(iii) Take G to be quasi-split and split over an unramified extension. Suppose φ factors through the standard map of the Weil group to $\mathbb{Z}$. Then does every element of $\Pi_{\{\varphi\}}(G)$ contain the trivial representation of some maximal compact subgroup of $G(F)$? Conversely does every representation in $\Pi(G)$ containing the trivial representation of a maximal compact subgroup belong to $\Pi_{\{\varphi\}}(G)$ for some φ of the above form?

Any comments, intelligent or otherwise, would be welcome. Our address here is

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