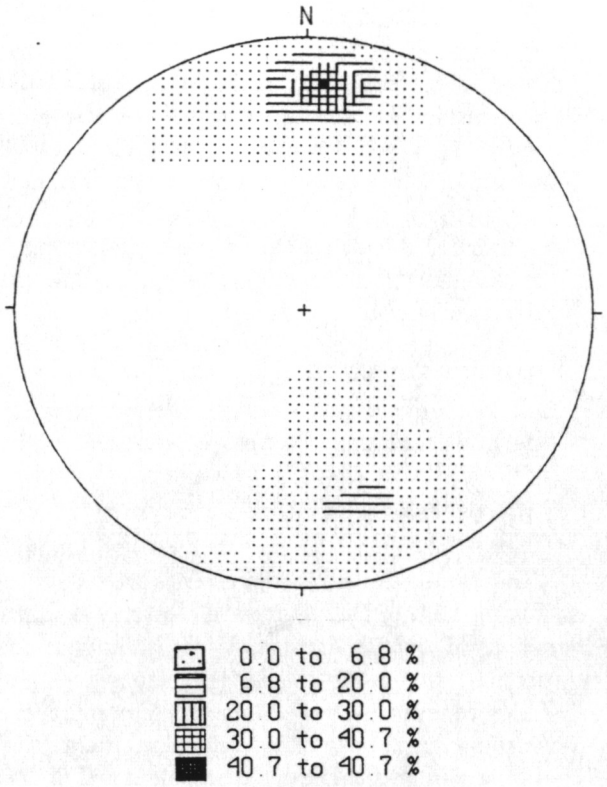

FIG. 6. – Distribution of the main Variscan foliation (S_{V2}) in the Fiorano - Lessolo area of the Canavese Zone. The foliation poles are plotted in the Schmidt equal-area grid. The maximum frequency is oriented N-S, oblique with respect to the main tectonic alignments of Alpine age.

The mylonitized diorites are reddish brown in colour and show a marked foliation. The mylonitized volcanics are purple and show a foliation defined by white mica, which separates mm-thick microlithons of poorly deformed rock (fig. 7). In such mylonites, shear zones cross-cutting the mylonitic foliation are very obvious. These microshear zones, arranged « en echelon », cut the main mylonitic foliation and rotate into it. In the Liassic shales, the main foliation is mylonitic and the interbedded limestones show calcite veins isoclinally folded and parallelized to the main foliation. In the pre-Alpine basement, the Alpine mylonitic deformation produced phyllonites green in colour owing to the widespread occurrence of chlorite. The Alpine mylonitic bands are subvertical and may plunge both to SE and to NW. In the metabasites, the Variscan assemblage is overprinted by very-low grade minerals (Pl is replaced by Prh and Hbl is retrogressed to actinolitic amphibole and to Chl + Pump).

The mylonitic foliation F_{A1} is deformed by cm- to dm-sized asymmetric open folds F_{A2}, with sub-horizontal axes and sub-vertical axial planes directed NNE-SSW. In the Liassic shales these folds may produce closely-spaced crenulation cleavage.

Since this mylonitic deformation overprinted the whole Canavese, Mesozoic rocks included, it fellows that it must be of Alpine age.

foliation of meta-aplitic dykes is consistent with that of the surrounding gneiss and no evidence of older foliations or folds is found. Therefore it may be suggested that the granitic protoliths, from which both meta-aplitic dykes and micro-augen gneiss derive, were emplaced before the transposition event, responsible for F_{v2}, but later than F_{v1}.

4.2. Alpine evolution

The most obvious effect of the Alpine deformation is the development of mylonitic shear zones bounding the subvertical NE-SW trending lens-like tectonic slices. The mylonitic zones, ranging in thickness from a few decimeters to about 10 m, show a marked foliation F_{A1} (Alpine foliation), whose characters change depending on the involved lithology.

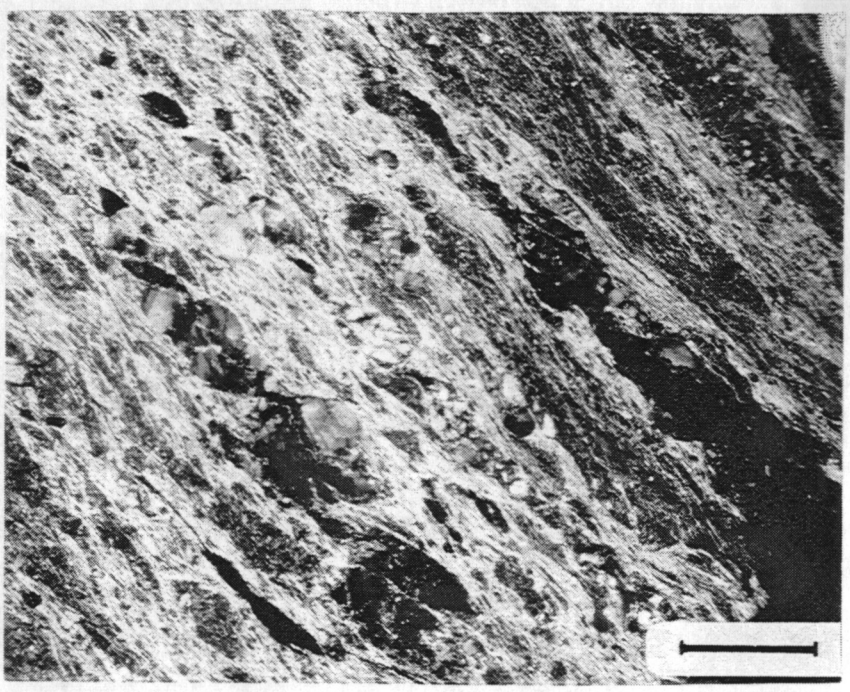

FIG. 7. – Microphotograph of a mylonite derived through Alpine deformation from a Permian rhyolite (ZC 273). Note the protomylonite with K-feldspar phenoclasts (in black), which grades to a sericite - chlorite - quartz phyllonite. Crossed polarized light. Scale bar = 0.5 mm