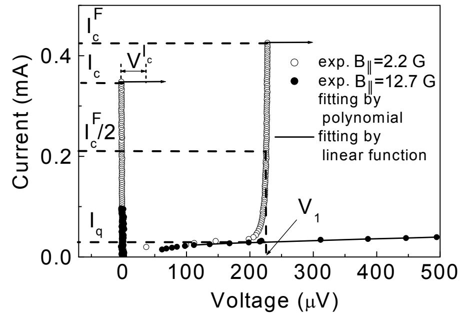

FIG. 2: $I - V$ curves recorded at $B_{\|} = 2.2G$ when the first Fiske step is maximized (open circles) and at $B_{\|} = 12.7G$ when the Fiske step is suppressed (closed circles,). The method allowing to extract both the amplitude of the first Fiske step, $I_F^{(1)}$, and its voltage position, V_1 is shown. The voltage position is obtained by the dashed line which is parallel to the current axis and intersects the Fiske step branch at $I = I_c^F/2$. The amplitude of the first Fiske step is $I_F^{(1)} = I_c^F - I_q$ where I_q is the quasiparticle current at voltage V_1. V^{I_c} is the threshold voltage to define the Josephson critical current.

current in the sub-gap region.

The method to determine the voltage position V_1 of the first Fiske step is shown in Fig.2. We note that the voltage position can also be estimated as the voltage at current I_c^F (see Fig.2) but the difference between this method and the one represented in Fig.2 is negligible.

The experimental technique to measure the Josephson critical current I_c was as follows. The current I was increased linearly in time from zero value, and the junction voltage V was simultaneously recorded. When the current reached the Josephson critical current value, a non zero junction voltage appeared. Under a condition that the junction voltage equals to the threshold voltage V^{I_c} (criterion of the Josephson critical current, see Fig.2), the current value was recorded and the current returned back to zero and then the next measuring cycle started again. The current sweep frequency was 10 Hz and the value of V^{I_c} was of 10 μV.

A cycle to measure the amplitude of the first Fiske step was similar to the Josephson critical current measurements but the starting value of the current was chosen to satisfy the condition that the junction voltage was greater then zero and less then voltage position of the first Fiske step. From this starting point the current was increased, the first Fiske step