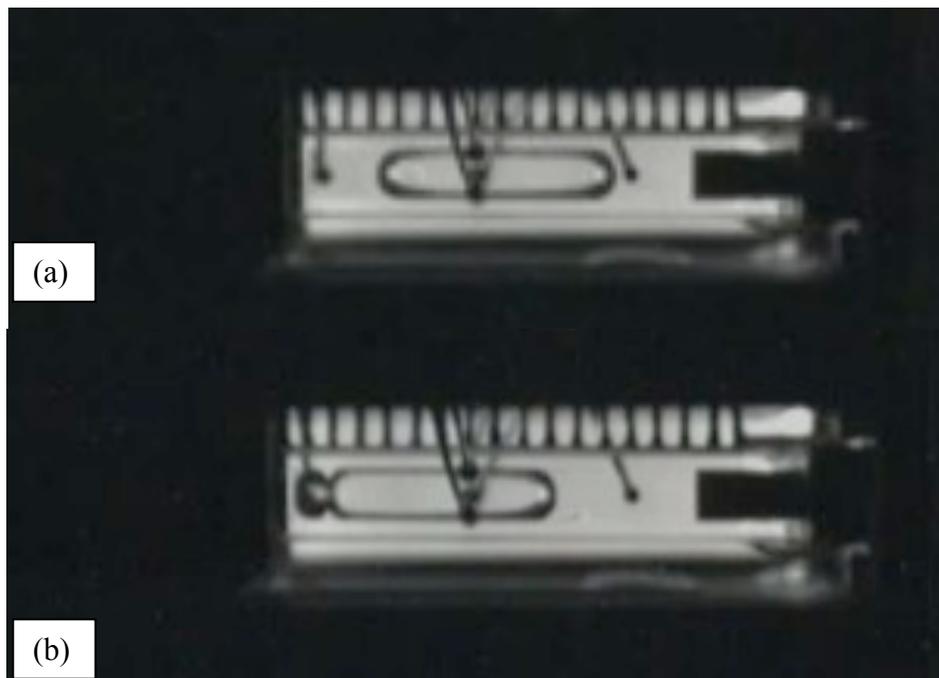


### **CVB 20-mm module operations completed on the ISS.**

About 80 percent of the Constrained Vapor Bubble (CVB) 20-mm science matrix was completed on October 26, 2010. Operations of the CVB are to be completed within the planned time of October 29, 2010. During the first operations of the 20mm CVB module (June) unexpected nucleation events were observed while the bubble was being heated and grown to the proper size. Since these events were both very interesting and unplanned the science team requested that 20-mm operations be suspended, and move on to the 40-mm module while they assessed this finding. The 40-mm module was successfully tested and operations returned to CVB 20-mm module on October 13, 2010 (installation) with powered operations beginning October 15, 2010. Interesting bubble nucleation was again observed and the nucleation events were studied for a period of three days. Since the nucleation events seemed random, it was difficult to capture the image data; however, multiple sequences were captured successfully along with Temperature and Pressure data. These events stopped when the bubble was grown to the full size to complete the planned test matrix. The 20-mm module is the last of the CVB operations. (POC: MAH/Ronald Sicker, (216) 433-6498)



**Image of the CVB 20-mm module showing (a) the original bubble size and (b) a nucleated bubble as it is about to merge with the main bubble.**