high rate. Notice here, that the bulk of the EVA time was down around 140, as far as his heart rate is concerned during the EVA activity.

And, so, we have had thus far, two that have looked to be fairly easy, one that looked to be a little more difficult, and here, again, he peaks up at the time that he does close the hatch.

Then, we went to Gemini XI (fig. 31), and Dick Gordon went out to put the tether on, and you remember what happened at that particular time. He moved to the nose of the spacecraft here, he connected the tether, and then he was completely tired and went back to the spacecraft. He ran his heart rate, here, around this 180 period, for these three peaks at that period of time, and, then, you can see, over here, that he came back into the spacecraft.

Now, this left us with a decision about this AMU. We decided that we were going to try and modify the activity and determine a little bit more about what man's capability was.

In order to help us do this, we had started, during the EVA, to determine what workload man could do, and to determine this ahead of time. We used a bicycle ergometer, and you can, in the laboratory, make a plot like this (fig. 32) which will help you plot his heart rate versus B.t.u.'s output per hour, and thus you can figure out how much energy he is expending in doing a given task, if you can relate it to his heart rate. Now, the difficulty that exists in a space flight situation is that you can't duplicate it exactly, because there are some other factors involved. You are in a new situation, and there are some other

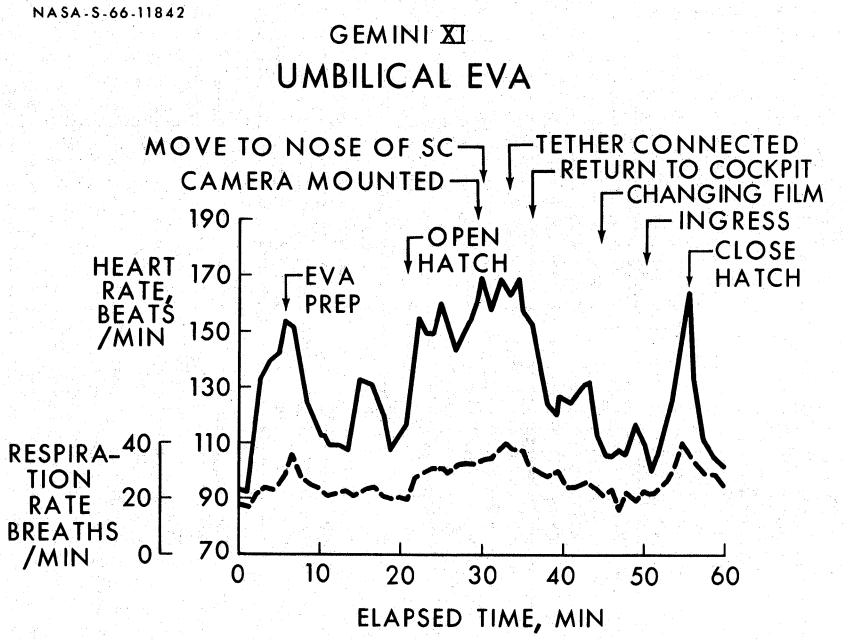

FIGURE 31