

that the environment has been better for man than we had thought that it might be, and man has responded better.

What has been the object of our medical program in space flight thus far? (fig. 10).

We can see on this slide that the first thing is to try to determine the duration of space flight exposure that man can undergo without any physiological or performance decrement, and that is the primary thing that we have to aim at.

Now, once we get some of our activity done in this area we can then look at what caused any changes that were observed, and then are there any things that we need to do to prevent these changes, and if we need to treat them, what is the best thing to treat them with.

I told you that we could look at a tracing of the heart rate (fig. 11) that would show this light and darkness variation.

This black line represents the nighttime at Cape Kennedy, and these cross-hatched areas the sleep period that we feel the crews got. This is during the first 192 hours of the 14-day flight for one of the crew members, and you will note here, the mean, and the low heart rate.

This is prelaunch, this is at launch time, and, then, these are the variations that occur as the days went on.

These are 4-hour heart rates, compiled for 4-hour intervals.

You will note this variation that goes with a drop in the heart rate during the period of nighttime at Cape Kennedy and the sleep period.

Now, this is man's normal variation, and this goes on not only for heart rate, but for a number of other body functions and hormone functions, too, and this was the thing that we maintained in this state

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GEMINI VII

PHYSIOLOGICAL MEASUREMENTS

PILOT

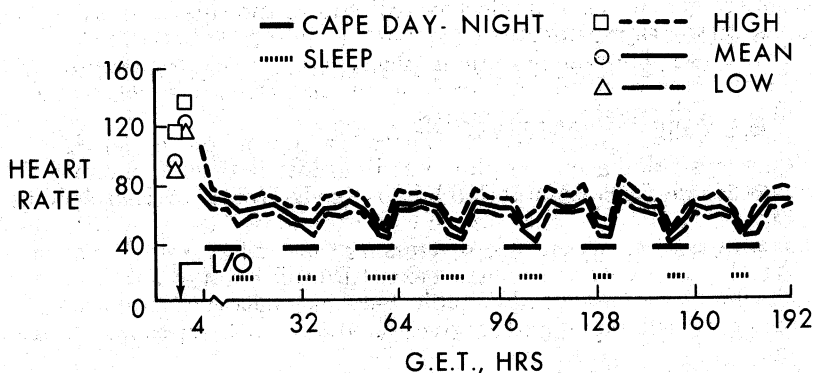


FIGURE 11