and, in fact, the National Aeronautics and Space Administration represents one of several sources of considerable technical talent within the Government that the Government has available to it, and I think that in order to manage properly, it is essential that the Government have a competent group of technical people. This is the only way I know to keep technical people competent with an understanding of current technology, that is, to have them do a certain amount of actual technical work themselves.

I don't think that one can otherwise, in the long term, manage to understand the real technical problems that are associated with these complex developments.

Mr. GURNEY. I follow that argument but if you follow it to its logical conclusion, then you would have to say that it would be necessary for the Government and NASA to build Surveyor and Lunar Orbiter and Voyager and any one of these programs. The argument is exactly the same if you follow it through to its logical conclusion and we completely defeat the purpose that we have expressed to do as much as possible through private enterprise.

Dr. MUELLER. Mr. Gurney, one can carry this argument to any of these extremes. One could just as well carry it to the other extreme where all the work was done by private enterprise and there were no governmental laboratories at all. That is, of course, a possibility.

I think that the balance that we have achieved in NASA is a sound one where certain things are done in-house and the majority, some 90 percent or more of the work, is done by private industry.

When we are talking about these two particular items, we are talking about something on the order of $45 to $55 million worth of work. All of that money is being spent in industry and we are talking about perhaps half that much in terms of in-house effort.

Mr. GURNEY. How many people will be employed in this particular effort of putting together the observatory?

Dr. MUELLER. In terms of industrial contractors?

Mr. GURNEY. I mean NASA people.

Dr. MUELLER. We have something on the order of 400 or 500 people working on this. We have something like a thousand or more people in industry.

Mr. GURNEY. I am not sure this is the correct place to inject this question, Mr. Chairman, but I think we ought to develop some evidence here at these hearings of NASA manpower in comparison with industrial manpower.

For example, industrial manpower we know peaked here a year or so ago and now it has gone down very considerably in this space program.

I am wondering where Apollo shows a corresponding increase? Is it proper to go into it?

Mr. TEAGUE. At Huntsville we went into this. All the details are in the hearing. I think we covered it very thoroughly.

Dr. MUELLER. Let me add just one thought, Mr. Chairman, if I may, and that is that the manned space flight organization has increased slightly.

In the case of the Apollo program, there is a role that our manned spaceflight organization is playing that is a quite important role in