



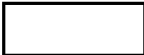
Section STAT

December 17, 1968

STAT




Dear Paul:

I have returned from my trip to  and have the following remarks to make.

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1. The stereo comparator is indeed a tremendously complicated system.

2. I completely agree with  that such an optical system would have cost a fortune in the U.S.A. It is even doubtful if any optical company would have been able to complete it with the time schedule planned. The cost would probably run from three to five times as much.

STAT

3. I quizzed the designers at length about the system and was satisfied that they were very competent, experienced, and had put a great deal of effort into the design and were also deeply involved in the building of the system.

4. I was not able to find any obvious things they had overlooked. I was surprised with how much they claimed to have reduced the secondary color, but I concluded that it was due to their using FK50. I have always considered this glass to be too exotic to use in a practical design. It has many difficult properties, such as easy to crack, stains easily, and tends to have striae. I questioned them a good deal about this glass and they didn't seem to think it was a problem. They also claimed they could coat it with no difficulty. I hope they are right and that my fears are unjustified. It is too late now to change; it will be necessary to wait and see.

Declass Review by

NIMA/DOD

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[REDACTED]  
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5. There are so many surfaces that I questioned them at length about coatings. They were somewhat vague about this and indicated that they planned to use some three-layer coatings. I warned them that three-layer coatings can absorb badly in the blue end of the spectrum. They could also scatter light badly. I was not sure that three-layer coatings should be used unless they were sure that they were done by experts. They said they planned to use [REDACTED] to do their coatings. This is an excellent company and should do a good job.

25X1

6. Everything about [REDACTED] was old-fashioned, but probably adequate. Their rooms and working quarters were dismal and poorly lighted. Their workers were old and decrepit. They will not be able to continue optics much longer without a major overhaul. Modern young people will not work under such conditions.

STAT

7. [REDACTED] is an exceptionally fine engineer and the whole project rests on his skill in working with these people. If it were not for him, I would give you a dim chance of ever realizing that instrument. You better take good care of him and treat him well. I was really impressed with him. He has things very much under control. Thank goodness I am not under his control. He is a taskmaster.

STAT

8. I am very sorry that an instrument of this complexity could not have been made in the U.S.A. I believe we must find a way to do so. I feel badly that we are encouraging the exploitation of people for this kind of work. We should have exploited machines. I admit it would have cost much more, but if handled properly, it would have cut future costs.

9. I could not recommend doing this again on future instruments, particularly if you don't have [REDACTED] I predict this would have been a disaster without him.

STAT

I would also like to report to you on two items pertaining to my last visit to your laboratory.

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[redacted]

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I read a report on the micro densitometer and I believe you should be careful about the [redacted]. Their report on the color correction of the objectives was very poor. Many of the statements were wrong and the color curves they showed were incorrect. Their conclusions about the apochromats showed a complete lack of understanding on chromatic correction.

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I was particularly disturbed by the illuminator for the pin hole. They referred to a paper by [redacted] 25 Heft 1, 1967. I looked at this paper and it is okay, but the [redacted] pin hole illuminator doesn't make sense.

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I wish you would send me the parameters on the densitometer optics. I believe you have been sold a bill of goods and that it should be challenged. [redacted] should know better also.

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Sincerely,

[redacted]

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r

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cc.

[redacted]