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NRC-CMRC

3 December 1993

Mr. George R. Lewycky
7 Durst Drive
Milltown, NJ 08850 U.S.A.

Dear Mr. Lewycky:

Thank you for your interesting letter of 14 November 1993. I am glad to hear that you got the required spectra. I have looked over the literature. There is one rather old paper on the formaldehyde spectrum by Henri and Schou in the *Zeitschrift für Physik*, vol. 49, p. 774-826. It has a fairly good description of the absorption spectrum in the laboratory. I am enclosing xerox copies of a few pages which cover the interesting part of the spectrum in the region 3500 to 2539Å. According to the authors, the strongest absorption band is 2970Å right in the center of the spectra you have. At lower wavelengths, the lines become broad and would be hard to recognize.

I have just been speaking with one of my colleagues here. He has many photographs of formaldehyde spectra in the ultraviolet taken in the lab at high resolution which he would be willing to put at your disposal if you think they might be useful. However, the first problem at the moment is to establish whether there are any lines in your spectra of Titan which are not in the spectrum of Saturn (or the sun). In the spectra you sent, I was unable to find such lines. A more elaborate scheme will have to be used to establish whether there are distinct differences.

Let me know if I can be of further help.

Sincerely yours,

G. Herzberg

Encl.