THE UNIVERSITY OF ARIZONA
TUCSON

LUNAR AND PLANETARY LABORATORY

January 26, 1962

Dear Phil,

Thanks for the letter of January 22, 1962. In looking through my records, I find that the transit list that I sent to you did not include my most recent observations of Jupiter. I have added these later observations to the last sheet of the list, made another Verifax copy, and enclose it. Please substitute this sheet for the last page of my list.

The coming Ranger-3 shot has put things in a bit of an uproar at the Lunar and Planetary Lab. Dr. Kuiper and Ewen Whitaker will be in the receiving room at Goldstone (Calif.) when the television photos come in as the camera package closes in on the Moon. They will be using a set of our globe photographs which have the foreshortening removed. It will be no easy trick to identify the impact area from the photographs, even if all goes well.

Others will also help here in Tucson. When the approximate impact area has been computed from observations of the rocket, Dr. Kuiper will phone Alika and give him the position. Alika will be observing that morning with the 36-inch at Steward Observatory. Bill Hartmann and I intend to use the Steward 12-inch reflector (Calver) and Alika's 6-inch reflector, respectively. I personally don't expect an impact cloud or flash great enough to be seen, but we'll give it a try, hoping for the best.

I would be interested to know what you think of the composite drawing of Ganymede made by Robinson and displayed on the front cover of the last Str. A. Bill Hartmann, Alan Binder (another observer and grad. student here in the LPL), and I made some composites of the eight "original" sketches also given in that issue. We concur in our objection to Robinson's copying the originals and thus destroying any of the several drawing styles that must have existed in the real originals. The composites that we made also indicate that a great variety of composite drawings could be made up from the same set of eight drawings.

This has also prompted us to perform some other experiments which pertain to visual observations of planetary details. It is useful to know the approximate limitations of one's eyes.

The three of us have conducted a series of simultaneous observations of Mercury during the current elongation of that planet. We use the 11cm refractor (Zeiss) at Steward Observatory and observe in the late afternoon before sunset. I have been amazed at the markings that one can see with modest magnifications (X206 and X412) on this small telescope! Our three drawings, made quite independently, of course, often agree rather well. I must admit a change in opinion concerning amateur observations of Mercury with very small apertures. My previous experiences with the 40-inch Yerkes telescope any my own 12-inch had led me to conclude that little or nothing could be done with apertures less than 12 or 16-inches and magnifications less than X400. Naturally, one needs big telescopes to observe the real detail and to make accurate sketches of the positions of various features. In this connection, I feel that the map of Mercury made by Gary Wegner a year or so ago (published in the Str. A.) was a little too detailed. Owen Ranck used to see quite a lot with his 4-inch, too. At any rate, we are finding our observations rewarding in many respects and Geoff Gaherty will probably be pleased that more observers are making an effort to tame his little planet.

I hope you have seen a copy of Kuiper's Planets and Satellites (Vol. III, The Solar System) and the photographs of the planets that it contains. Those of Jupiter with the Palomar telescope are a real treat. I saw the original prints of those (on slightly a larger scale) and they are truly fantastic!

Alika and Bill send their regards. All best wishes.

Sincerely,

Dale

Dale P. Cruikshank

asked about reproducing PLATE 10 in next Halbk.

2/6/62

Lunar and Planetary Lab
University of Arizona
Tucson, Arizona
February 21, 1962

Dear Phil,

Thanks for your last letter. Yes, the Jupiter photographs in Kuiper's Volume III are excellent. I prepared those prints for publication by mounting them on heavy board and retouching a few irregularities on the emulsions. The prints were supplied by Humason to Kuiper as semi-glossy and not really glossy. I believe, however, that they were actually printed on glossy paper and dried on something other than a ferrotype tin, resulting in the semi-gloss. To the best of my knowledge, all prints supplied by Mt. Wilson and Palomar are this type of finish.

I enclose an old MWP catalog listing photos and slides from the Observatories which can be obtained from the Cal Tech Bookstore, as indicated on the catalog cover. I am quite sure that these people can sell you the print you want if you describe it adequately giving the date, time, etc. If it is essential that you get a glossy print, you can always soak the print in water and dry it again on ferrotype tins--assuming that this is actually glossy paper, but then you probably know all about this matter of drying, anyhow. If you have no available means of drying the print glossy, I would be pleased to do it for you on our drum-type ferrotype dryer at the Lab.

Kuiper's copy of the print has not been returned from the U. of Chicago press at this time, and is mounted, thus precluding re-drying.

I have another copy of this catalog, so you may keep this copy if you wish. It's pretty old (1951) and the prices may have changed a little.

Geoffrey Gaherty and I are interested in the possible cost of printing a Mercury handbook. Rumor has it that the Jupiter handbook cost about 19¢ per copy. Is this about right, and if so, how many copies were printed? Walter Haas has my manuscript now and is making some final corrections. We hope to have the thing available soon.

Bill sends his regards.

Sincerely,

Dale Cruikshank

Tucson, Arizona
March 29, 1962

Dear Phil,

Just a quick reply to your letter of March 26. Naturally, I will give a suitable and favorable reference if I am consulted. The prospect of a large aperture on Jupiter from an entire opposition sounds most exciting and I sincerely hope your plans materialize.

Regarding Jupiter itself, I have just returned from an observing run at McDonald Observatory with G. P. Kuiper and during my stay I was able to obtain a set of latitude measures with the position filar micrometer on the 36" reflector. Seeing was quite good (6), Transparency 3 (on Lowian), bright background sky, X 600, 12:30 UT, March 26, 1962.

s edge SEBs = +7°.5 zenographic
n edge NEBn = +17°.9 "
center STB = −29°.8 "

I feel that these measures are quite reliable and hope that they will be of some interest to you.

Sincerely,
Dale Cruikshank

Cyrus?

1216 Leeds Terrace
Baltimore 27, Md.
Oct. 23, 1962

Dear Phil,

I have seen two small dark spots in the South Equatorial Belt (S) that are moving rapidly in increasing longitude. They were first seen on Oct. 12, the leading spot is noted as No. 2 of this date. The following spot is noted as no. 4 on Oct. 14, 3:21 U.T. The last transits of them were made on Oct. 19 and noted as objects #2 and #3. The leading spot is drifting about 3.4° per day and the following spot is drifting about 4.0° per day. Some of the transits could not be made accurately because of poor seeing but they give us an idea of the rapid movement of these two objects.

The festoon observed on Oct. 2 and reported previously has widened and faded. On Oct 14 it appeared as a double festoon and on Oct. 19 (object no. 1) as a complex dark area in the S.E.B(S)

The S E B(S) is very active this year and shows many dark condensations.

Best regards
Charles

CLARK R. CHAPMAN
3 HOLLIS HALL
HARVARD COLLEGE
CAMBRIDGE 38, MASS.

January 11, 1963

Dear Mr. Glaser,

I hope that you received my 1962 Jupiter observations which I sent to you some time ago. I am enclosing herewith a copy of my December 14th drawing. I have made two more drawings since then which I probably cannot copy for some considerable time. They are rather interesting drawings, so let me know when you would be interested in receiving them. I will report below the written data which accompany these drawings (excluding CM transits).

January 9, 1963 -- 22:35 UT, seeing 2-4, trans. var. 3, telescope 7½" refr. at about 200x, Harvard Col. Obs. Sat. Phen.: contact IV at 22:27¾ Belt Prom at 23:10: SEBn, close NEBs, close STB, NNTB, SEBs, SSTB. The Red Spot is disintegrating and was mainly recognizable by its remaining light orange tint. It seems fragmented and it is possible that SEBs spots were crossing it. Notice (on drawing) that the disturbance surrounds Jupiter in both the STrZ and the SEBZ. The equatorial regions are looking more normal in some longitudes. The NTrZ was brighter than the NTeZ. The STrZ was brighter than the SEBZ following the Red Spot while the reverse was true preceding it. Note the NTrB (?) Note satellite, also its shadow over the Red Spot.

January 10, 1963 -- 22:20 UT, seeing 3-4, trans. 3, 7½ inch Clark refr. at about 200x, Harvard Col. Obs. Equatorial regions are much more normal with a lighter EZ. The drawing is a fairly realistic representation. The weather was fair and quite mild.

I now have 617 CM transits of which 610 have been reported to Elmer Reese.

If you have a handy photograph (preferably in color) which you could easily spare for a week, a friend of mine here at Harvard is doing his term paper on the Red Spot and would like to see what it looked like. I had promised to show it to him with the 7½ inch but the Red Spot is rapidly disappearing and I doubt if an unexperienced observer would see much of anything.

School here has been keeping me busy. We have finals in a couple of weeks and I am not doing especially well, so I MUST do well on the finals. I did little studying over Christmas vacation. I had decided to devote it to visiting friends (which I did plenty of) and observing Jupiter and Mars (which were all but completely clouded out).

I do hope to hear from you shortly that you received by earlier report. Best wishes to you!

Yours truly,

Clark

Clark Chapman

Doug Cooke
4762 Mt. Hay Dr
San Diego 17, Calif.

Dear Mr. Gloser,

I am writing to reestablish contact from last year and request a supply of Jupiter Observing Blanks.

Because of the usual summer "night and morning low clouds on the coast" (which means pea-soup every night of the summer) my observing has been limited to my weekend camping trips during the last month only. However the weather has finally broken for the better and with luck I should be able to start an active program.

I would like to ask for at least 25 blanks, if I may. By the time they come and I manage to fill all them out I'll probably be ready for more. Re-doing my drawings is the most difficult part of the whole job.

I would like here to give my most hearty regards to the new transparency scale (Robinson)! I have been able to test it anywhere from Mt. Palomar (Beautiful! - I'd love to stay there forever) to downtown San Diego. I find it cuts all personal and locational preferances out immediately. After a few months in the same place you start to think of any night as pretty good until you get out in the clear mountains. Then Wow! Now if Mr. Robinson will come up with some simple, overlooked, and obvious scale for seeing; we'll have it made.

I fear I have come in too late. I have no idea what Jupiter should look during a "normal" year so I can't tell what it is doing now. But it seems just as topsy-turvy as ever. I some times get the impression

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that it's a bottle of milk and oil which has been shaken and is still settling.

I could swear that there is now an equatorial belt. The festoons of last year are so faint and variable in latitude that they seem almost light areas in an EB instead of a shifted EZ inbetween a NEBs and a SEB like last year. In larger scopes (>6 inch) it may be different, though. All the various changes in my scope are not helping much.

The RS is still quite noticable, though it is slightly smaller and lighter than last year. I'd like to illustrate but then I'll be up all night drawing. I'll get my completed drawings & timings as soon as possible.

Sincerely,
Doug Cooke