1961 January 16
Feb 15

Los Angeles, California

January 11, 1961

Mr. M. P. Candy
97 Hawkswood Drive
Hailsham, Sussex, England

Dear Mr. Candy:

Please excuse my lack of observing reports. I have been quite busy trying to get a permanent site ready and my mounting has not yet been repaired by Boller & Chivens.

The main purpose of this letter is, of course, to congratulate you on your marvelous discovery of Comet 1960n. At this time I do not know the particulars of the discovery although according to the BAA circular, you were testing an eyepiece at the time. Whatever the circumstances, I can think of no-one I would rather see discover a comet (except myself.) Your contribution to this field probably could be exceeded by none.

My best wishes for the New Year and may you discover another comet soon.

Sincerely yours,

Alan McClure

ALAN McCLURE

649 South Olive, Room 819
Los Angeles 14, California

1961 Feb 3

Los Angeles, California

January 30, 1961

Mr. M. P. Candy
97 Hawkswood Drive
Hailsham, Sussex, England

Dear Mr. Candy:

I finally got my equipment back in time to get out and photograph your comet as well as P/Encke. While I have not prepared a complete report at this time, I thought that I would send along the two photographs secured on the night of January 17/18th. Some notes are on the back of the prints.

Please excuse all of these delays. I shall endeavor to catch up soon.

Once more I must congratulate you on your discovery.

Sincerely yours,

Alan McClure

ALAN McCLURE

649 South Olive, Rm. 819
Los Angeles 14, California

Acad 1961 Aug 27
& Ack. rec'd photos.

Los Angeles, California

August 3, 1961

Mr. M. P. Candy
97 Hawkswood Drive
Hailsham, Sussex, England

Dear Mr. Candy:

Last week I sent you, by airmail, some photographs of the new Comet Wilson. At that time I did not include a letter since I felt it would be more important to get the photographs off as soon as possible. Since I sent these photographs to you there has risen the question as to whether or not some of the features taken with the Hasselblad camera were caused by internal reflections. I took 5 different photographs with this camera and all of them seem to show the same features. I am going to check more with others on this although it appears as though no one else took any wide-field photographs on the same morning. I wonder if you could give me your opinion as to whether the second, faint, straight tail could be real or is most unlikely? At any rate, in the meantime I would regard it with suspicion.

There is a problem in using conventional cameras for astronomical photography. The designers of these cameras do not adequately control internal reflections. I can assure you that when I build an astronomical camera I pay very careful attention to the control of stray light even to the point of making sure that light reflected off the photographic plate is absorbed. Believe me, I shall not use the Hasselblad again for this purpose, however, these features may be real but I would certainly like to know for sure.

I did get out again in the morning of August 1st. The weather at Pinos was excellent and the transparency was superb, however, the moonlight still interfered. I estimated the total magnitude of the comet at about 4.8 - using 7 x 50 binoculars extrafocally. However, using 12 x 70 binoculars the coma appeared to be about magnitude 7.5. Certainly, this comet has most of its brightness in the tail. About 6° of tail could be seen in the binoculars, although using the 5-inch focal length f/2.0 aerial lens with an orange filter, plus a polarizing filter, 12° could be faintly detected. This comet certainly came at an inopportune time as far as the moon was concerned. It looks like it will be considerably faded by the time the moon finally gets clear. However, it certainly should be a worthy object even then.

Sincerely yours,
Alan McClure

ALAN McCLURE

649 South Olive, Room 819
Los Angeles 14, California
U.S.A.

P.S. I have found the trouble was in a too-strong pressure spring in the film magazine on the Hasselblad camera. The "cloud" in the middle of the picture was caused where this coil

pressed against the film while at rest.
The vertical "streaks" ("straight tail") and suspected object) were caused when the film was advanced. These marks showed only in areas of heavy density. This is very embarrassing to me and it hope it has not caused you much inconvenience.

Incidentally, the reason I had so much trouble was because of the extreme speed film used (Royal X Pan). Apparently this film is also very pressure sensitive. This trouble did not show up using slower speed films. C.H.A.

1960 May 23
June 23

Los Angeles, California

May 16, 1960

Mr. M. P. Candy
97 Hawkswood Drive
Hailsham, Sussex, England

Dear Mr. Candy:

Thank you very much for your letter of April 24th. I was glad to hear that you are planning to use some of my photographs in the B.A.A. Journal. I was most interested in the information concerning the magnitude of the comet and I feel that Dr. Waterfield's estimate of the brightness was optimistic because of the fact that the comet was so bright in the blue and because it is difficult to estimate cometary magnitudes from any but the very shortest exposures.

Enclosed are prints of all of the good plates that I was able to obtain of Comet Burnham. Unfortunately, the weather reverted to winter just when the comet was at its best. You will note that complete reports are not enclosed. Since I have to leave town for Arizona, I thought that it would be better to send the photographs now and complete reports later.

There is one problem that I seem to have and that is the measurement of position angles of the tail. As far as I can find, this is the angle measured from North and, for example, if the comet's tail points directly East, the position angle of the tail would be 90°. However, on the I.A.U. cards, I have been seeing a number of reports giving all sorts of odd position angles for the tails of Comet Burnham. This makes me wonder if I am measuring these position angles properly and I also wonder why these tails do not record on my photographs. These photographs showed about all that there was to be shown and the only answer I can think of is that some of these observations were made visually, with large telescopes and that the observer recorded a jet near the central condensation and that these would have been "burnt out" on my photographs, being masked by the coma.

Again, my apologies for the incompleteness of this report. I'll send the rest of the information along as soon as possible.

Sincerely yours,

Alan McClure

ALAN McCLURE

649 South Olive, Room 819
Los Angeles 14, California

P.S. The brightest estimate was at about april 26.5(U.T.) from my back yard in the city (through a very slight cirrus haze). I estimated the comet at 4.4 mag. in Ex-R.A.F. opera glasses. It had been cloudy all night but cleared off before dawn.

Ans'd
1962 May 17

Los Angeles, California

April 13, 1962

Mr. M. P. Candy
97 Hawkswood Drive
Hailsham, Sussex, England

Dear Mr. Candy:

Thank you very much for both your recent letters. I certainly was not thrown off by the ephemeris since the comet was so easily visible to the naked eye. As you know, I have made some mistakes myself lately and it is good to see that someone else also makes mistakes. I wonder if you were among the "etceteras" who received copies of Elizabeth Roemer's letter to me last January. This was a rather painful mistake for me and it may sound odd to say, but I congratulate you on your mistake. (Apparently, Elizabeth Roemer is the only person who is perfect.) You said in your letter of March 26th that we are all entitled to at least one error but I am afraid that I am due for more in the future. My trouble began with the defective Hasselblad pictures of Comet Wilson, and was followed by Comet Harrington-Abell foul-up, I wonder what will be next?! (of course I'll try to make different mistakes the next time!) The person writing this letter to you is perhaps the world's most disorganized individual. Anyway, I find myself with a letter to you dated February 24th. I am enclosing this letter at this time with apologies.

Also enclosed are some photographs of Comet Seki-Lines which I obtained on April 10, U.T. I had not expected the comet to amount to very much and was amazed to find that I could see it from the city on April 9, U.T. I believe that the features shown in these photographs are all real and I would be most happy if you were able to put a few of them on display at the exhibition meeting. Comet Seki-Lines certainly is interesting and I wish I could have observed it more (as was suggested). So far the only good observations were those of the 10th U.T. On the 10th, using 7 x 50 binoculars, at a 7300' elevation on Frasier Mountain, I could see only a hint of the streaking in the tail and I did suspect a bit of an anti-tail although I discounted this until I developed my plates. It is amazing how much more showed on the photographs than visually. I have not yet reduced the amount of tail length visible in the binoculars but it was over 10°. (Reminds me of Comet 1910 a)

Incidentally, I now have a pair of Japanese 7 x 50 wide-angle binoculars which cover about 10°. They are quite good for comets although, of course, the images at the edge of the field are poor. Nevertheless, the additional field is quite a help. The binoculars were out of collimation when I got them and this seems to be standard for many of the lower priced binoculars.

This reminds me, how are you coming along with the comet seeking program? I have given thought to all sorts of programs but cannot do anything until I get out of the City. I feel that some form of photographic search might be the best, however, the amount of time required processing plates, etc., makes the visual method appeal to me also. I am afraid that the only way to really find out is to try both. I was curious about the high quality aerial lens that you were going to use for your program. The most ~~only~~ fatiguing part of the program you mentioned, it would seem to me, would be the blinking of the plates.

Thanks again for your letters.

Best regards,
Alan McClure
ALAN McCLURE

649 S. Olive, Room 819
Los Angeles 14, California
U.S.A.

P.S. Just read BAA Circular 439 Several degrees of tail were easily visible to the naked eye on the 10th UT. in spite of the moonlight. Good Transparency and the altitude must have helped.

Los Angeles, California

February 2[illegible], 1962

Mr. M. P. Candy
97 Hawkswood Drive
Hailsham, Sussex, England

Dear Mr. Candy:

Enclosed is a print of Comet Harrington-Abell which, as you know, I finally managed to recover on the 26th of January. We had quite a snowstorm in the area here and due to this I was unable to get anywhere near my regular observing sites. On the night of the 25th, I ended up by the side of a road and was occasionally bothered by car headlights as well as mediocre seeing caused by cold air draining down the nearby canyon. Only one plate was secured on the 26th and I had little hope of finding anything on it but much to my surprise this object was found right on the line of variation and right about where B.G.Marsden had predicted the comet might be found. Therefore, I went out again on the 29th (U.T.) and secured 3 more plates under [redacted] conditions. Nevertheless the comet showed well and its motion appeared to be correct for P/H-A. At this point I was afraid to make any more claims after the fiasco early in January so I wired Harvard and asked them if they could get someone to confirm it. Fortunately, Dr. Roemer was able to confirm it the next night, thus ending a very trying period for me.

I suppose that I got off lucky in recovering the comet at all but I certainly wish that the unfortunate mistake of early January had not occurred. Nevertheless, I have learned from this and I now switch guide stars between successive exposures when searching for faint comets. This should throw off any ghost image caused by reflections between the lens elements. However, there are still plenty of mistakes to be made and much to be learned and I fear that I shall not be mistake-proof in the future. In this regard, I wonder if you were among the "etceteras" at the bottom of Elizabeth Roemer's letter which was written to me (although it appears as though the letter really was written to those persons receiving copies.)

So far, I have been unable to see the new Comet Seki-Lines, 1962c. Note See P.S. Dr. Cunningham's ephemeris is very interesting but he has informed me that the comet may be off as much as 5° near the end of the ephemeris. I also see that Mr. C. Jackson has supplied another set of elements which are noticeably different than Cunningham's. Of course, this is to be expected until enough accurate positions are available. I am wondering whether or not the comet will be visible later in March when the moon begins to get out of the way in the evening. Having no extended ephemeris, it is difficult to make a supposition but it would seem as though the comet will be below the horizon at the end of evening twilight by the time that the moon begins to move out of the way. Frankly, I am bursting with curiosity regarding this since the comet could develop into a very interesting object due to its close approach to the sun, (although Cunningham said he thought it might only reach 6th magnitude.) I shall be hoping to hear from you by way of the B.A.A. Circulars. The weather has been bad here but from what I read, it has been bad everywhere and I suppose this has hampered observations of this comet.

see P.S.

Unfortunately, my observations lately have been rather spotty and incomplete but I hope to do better in the future although sometimes I feel like giving the whole mess up. It seems as though, starting with Comet Wilson, I have not done so well but if I stay in this field, I hope to profit by the mistakes of the past.

Sincerely yours,

Alan McClure

ALAN McCLURE

649 South Olive, Room 819
Los Angeles 14, California
U.S.A.

Feb 26

P.S. Since I started this letter I managed to get in a visual observation of Comet Seki-Lines. This I had my wife mail to you today so it should have arrived by the time this letter reaches you. I was very glad to get BAA Circular #437 this morning for it gives the badly needed information as to where the comet will be before perehelion. You always seem to come up with an extended ephemeris sooner than anyone else and often with new comets, the BAA Circular is the first real forecast of the comet's motion. In case the earlier report does not reach you, at 4 hrs. 30 minutes U.T. on February 26th, I observed the comet with a number of instruments including some EX-RAF night opera glasses, 20 x 70 binoculars and an 8-inch f/4.5 refector. Magnitude was estimated, mainly with the opera glasses, at 5.5 and a tail about 80 minutes of arc long was seen in PA ~~88~~. This PA is only approximate since the tail did not go far enough to intercept any prominent stars that I could identify on the Skelnate Pleso. The comet does not appear to be running far off from Cunningham's elements although what might look good to me might look like a terrible error to you. (running behind somewhat)

Further Note: This N.G. photo taken following night showed 80° tail 8 ± 3° long (very faint). will send more reports

The weather around here has been terrible lately. As you may know, there is a major range of mountains running approximately in an east-west direction north of Los Angeles. I usually go observing to the northwest of Los Angeles, going as high as weather conditions will permit but lately there has been snow down to practically 2500 feet. In fact, it was supposed to be snowing in the mountains when I made the observation on the 26th. For this observation I went west of Los Angeles toward the end of a lesser range of mountains which only reach about 3000 feet elevation at the maximum. With the kind of weather we have had lately, the clouds are not so bad over these small mountains but they certainly do build up over the large ones.

Once again, I want to tell you how much I appreciate BAA Circular #437. The clouds look broken and I hope to try and get a photographic observation of the comet as soon as possible.

A.M.

Ansd 1962 March 26

Los Angeles, California

January 16, 1962

Mr. M. P. Candy
97 Hawkswood Drive
Hailsham, Sussex, England

Dear Mr. Candy:

On the night of January 2 U.T., I tried to recover Comet P/Harrington-Abell but, as you probably know, I did not recover the comet but did mistake some images apparently caused by internal reflections between the lens elements for the comet. Being relatively ignorant of orbits, I sent out a telegram. Harvard did send out the information although I have heard nothing so far about the claimed recovery from Copenhagen. (apparently, Dr. Thernöe realized the possibility of an error and he, therefore, wisely withheld the information. Indeed, Cunningham said that in the days when he was at Harvard, he would have called me on the phone had he received similar information under these circumstances). After talking with Elizabeth Roemer and Dr. Cunningham, I realized that anyone who was watching out for these things would have realized that this object could not have been Comet P/Harrington-Abell due to its distance from the line of variation. On the night of the 8th U.T., I attempted to either prove or disprove this as a new comet and unfortunately I was unable to find any confirming images on a number of plates taken that night. In other words, I have made a bad mistake and I fear that I have not yet heard the last of it.

I would assume that you were among the etceteras listed at the bottom of a letter which Elizabeth Roemer sent to me. Apparently, she sent carbon copies to a number of persons and I wonder who these persons are. I am not sure her letter was entirely fair since I did indeed later admit my ignorance and admit that it was highly improbably that the comet could be P/Harrington-Abell. During our phone conversation we did get into an argument about limiting magnitude. She claiming that limiting magnitude of an instrument was entirely dependent upon focal length and I claiming that while this is theoretically true, the size of the image formed by the optical system makes quite a bit of difference in this regard. Of course, I was comparing the performance of my 7-inch f/7 lens with the 13-inch f/5 at Lowell. The 7-inch lens is a modern design using Schott glass and I believe that it is relatively more efficient than the 40-year-old 13-inch. The faster lens can never be as efficient as the slower one due to the compromises that have to be made in order to get the extra speed. I told Elizabeth that if you could get say, for example, a 5 micron image rather than a 25 to 50 micron image, the energy of the star would be much more concentrated and you would therefore go considerably fainter but this did not seem to get through. I have compared a plate taken of M33 with my 7-inch lens with enlargements in Lowell Observatory Bulletin No. 93 and find that the 7-inch went at least as faint as magnitude 18.5 and the limiting magnitude appeared somewhere between 18.5 and 19.7. Of course, I only had reproductions in the Bulletin to judge by.

(I get around 25 microns at the [illegible] haven't checked too carefully.)

I have been told that there was a paper published in the Astrophysical Journal in the early 1950's on Micro-techniques. The essense of this paper is said to have been that some person took a small relatively short focal length Schmidt which gave extremely tiny images and, using fine grain film, he was able to go much, much fainter than he should have. This whole subject is interesting to me and I feel that many persons fail to recognize the difference in performance between different types and qualities of optical systems. Surely, any lens of a given focal length is inferior to a high quality

Schmidt for example. The Schmidt should go fainter.

It has been some time since I wrote to you and in the last letter I received from you you discussed the defects which caused me to record additional non-existant detail on Comet Wilson. I was surprised that your friend was able to recognize these as possibly coming from film magazine trouble. It took me over a week of worrying and questioning plus the help of a friend to finally decide what had indeed caused these. The camera was a Hasselblad and the pressure finger which holds the supply roll of film was far too strong. As the film was an extreme speed film (Royal Pan X), it was probably also extremely pressure sensitive. The so-called cloud in the middle of the picture was made by this finger while the film was at rest. As the film was advanced, the edges of the pressure finger made marks in the direction of the film travel. It was interesting to note that this was only in areas of heavy density on the negative which made it even more insidious. The final deception was caused by the fact that one of these marks tied up almost exactly with the comet. After this first observation of Comet Wilson there was much trouble with moonlight and I only obtained two other observations. The comet seemed relatively uninteresting and formless having none of the blue emission features which can make for spectacular photographs. The reason I did not observe the comet more was that I found that my equipment has become so cumbersome that night-to-night observations are practically an impossibility. When Comet Seki came along I unfortunately obtained no observations either, although I saw the comet from the backyard five or six times. It is so extremely light where I live that I felt that any observations, even magnitude estimates, would be practically useless. After missing Comet Seki I went out and fouled up on this latest thing and believe me, right now I feel like turning in my equipment. Certainly, I shall be cautious and more suspicious in the future.

A couple of prints of the defects which were mistaken for P/Harrington-Abell are enclosed. The contrast was greatly exaggerated in printing and on the original plates it is hard to decide whether or not the "forked tail" appearing feature was really moving also or whether it was part of the nebulosity in Orion.

In spite of all these troubles, I don't feel like giving up and you may indeed hear more reports from me although I now wonder if anybody will believe me the next time.

Sincerely yours,

Alan McClure

ALAN McCLURE

649 S. Olive, Room 819
Los Angeles 14, California

COMET WILSON 1961

Observations of July 24/25 1961 (U.T. = approx 11hrs.)

Location: Pinos (elevation 8820 Ft.)

Alan McClure
649 So. Olive St. Apt. 514
Los Angeles 14, Calif.

Visual Magnitude (total) est. in opera glasses about 3.2

Visual magnitude of coma est at about mag. 4 in 12 x 70 binocs.

(comparison star was theta gemini- mag = 3.64)

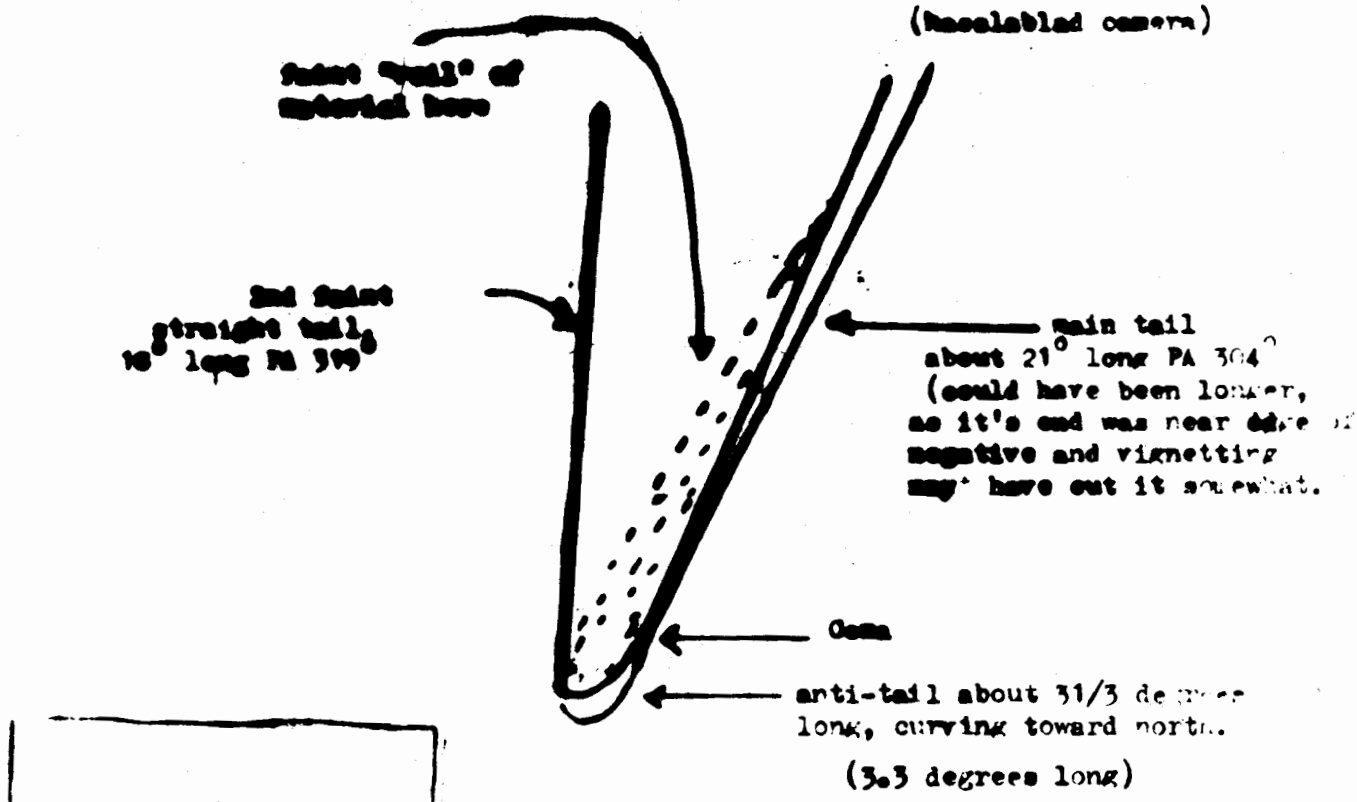
Tail length= Visual tail was approx 20° however with 12 x 70 binocs. tail could be traced to about 25° length.

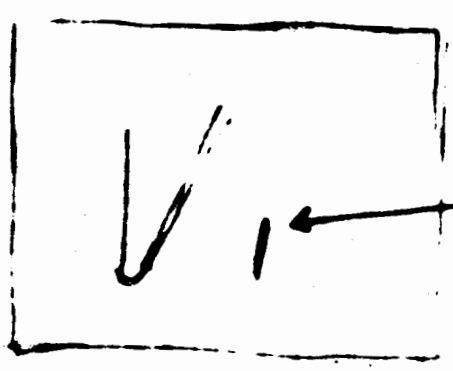
Anti-tail length = (visual with 12 x 70 binocs measured after objects was fairly clear of horizon) [redacted] (rough- approx)

Position: (Visual from Binocs. plotting - rough) R.A. = 6h 55m Dec. = +32° 30'
(plotted in Skalnate Pleso) July 25

Tail became visible 20 minutes before head rose, appearing like a searchlight beam.

Small scale photos with fast wide angle camera using panchromatic film and no filter showed the features below. (camera had 80 mm f.l. f/2.8 tessar lens) (Rascalabled camera)





Los Angeles, California

September 27, 1957 Posted 3.10.57

Rec'd 8.10.57

Ans 26.12.57 - and asked if
Snider on comet or on star - and
if streaks in tail of Aug 14.2 are real
re 1957 d Mrkos.

Dr. G. Merton
17 Hollywell
Oxford, England

Dear Dr. Merton:

I am sending you some photographs that I have taken of Comet Mrkos (1957d). All times are Universal time. These photographs were all taken with 100mm aperture 500mm focal length Goto camera on Eastman 103aE plates.

The photographs for the 9th, 10th and 11th were made through a #25 (red) filter. All the other photographs were made with no filter.

All enlargements except the negative print of the 13th are 2.19X.

The photographs were taken from an elevation of 8000 feet about sixty-five miles from Los Angeles.

I hope that these might be of some use to you.

Sincerely yours,

Alan McClure

ALAN McCLURE

Not BAA. I think -
I have asked him

649 South Olive, Room 819
Los Angeles 14, California

Boone's
1965 Dec 12

Nov. 12, 1965

Dear Mr. Candy:

Enclosed are a few prints of comet Ikeya-Seki. Unfortunately, I wasn't able to get out very many nights, however at least I did get some photos of this comet. Also, I did see it, and maybe this is more important anyway since it is what one remembers through the years.

The comet had the brightest tail I have ever seen on any comet, although the head was not so much. I'm sorry to not be able to send in any visual observations. The comet was so near the horizon that I decided to concentrate on photographic work, although of course, I scanned the comet with binoculars while I was supposed to be guiding. Most of the features on the photogs. showed in the binoculars, although they were much fainter, and I did see somwehat less detail near the bend in the tail.

It was really quite a comet, but I was a bit surprized that it didn't develop a longer tail. Why not? It's tail certianly did not compare with the comets of 1843 and 1882 (or am I wrong?). I believe that the tail was made up of allmost entirely dust, and maybe this streamed back along the orbital plane shortining the appearance of the tail (and also curving it). A crude objective prism camera seemed to indicate a dust tail (negatives were very bad), and of course, I anticipated a dust tail from this type of comet anyway.

Our friend Brian Marsden is now at Smithsonian which is very handy for me, although I still wish that the IAU central Bureau had remained in Europe.

I hope that all is well with you and that you got some good views of the comet(even though it may have been a difficult object at your latitude). Please give my best wished to Dr. Porter, and Mr. Hendrie.

Sincerely, Alan McClure

(Note new mailing address.)

new address

ALAN MC CLURE
7835 Torreyson Drive
Hollywood 46, Calif.

Los Angeles, California

October 17, 1963

Mr. M. P. Candy
97 Hawkswood Drive
Hailsham, Sussex, England

Dear Mr. Candy:

Enclosed are a couple of prints of Comet Pereyra. Unfortunately, I only observed the comet s few times. The first observation was a rather bad one but all I was trying to do was to find whether the comet really existed. Of course, the position I sent in was very rough and I hope that it did not cause any confusion. Comet Pereyra certainly was an interesting one and even before I learned that it was a sun grazer, I felt that it definitely had the "look" of this type of comet. (It reminded me of Comet Wilson in 1961.) Both comets had rather faint tails which were relatively difficult to photograph, considering their brightness visually. As far as I'm concerned, the tails of both of them were made up primarily of dust. Since the sun grazers are, in a way, relatives of the great comets, I find myself wondering if all sun grazing comets give out with such a large amount of dust. In the 1800's when they had so many spectacular comets, most of them were shown with straight tails and I wonder if this is just a coincidence or if it was caused by the angle from which they were seen. Of course, Donati's comet as well as Comet Seki-Lines had curved dust tails. (I am assuming this about Donati's) What do you think about the relative possibility that great comets are comprised of a great deal of dust? also Mrkos 1957d

Incidentally, one thing which was interesting to me was the way that Comet Seki-Lines became so dusty after it passed close to the sun. Before perehelion it showed up as bluish on my photographs and there was not much indication that there was dust in the comet. Of course, the minute I saw it afterwards - even from the City - I knew that it had a lot of dust since the tail was quite curved.

Getting back to Comet Pereyra. What do you think of the original magnitude estimate? I wonder if it really faded that fast or if the discoverer was a bit optimistic. Possibly he was compensating for what he considered to be the probable extinction. I almost always estimate comet magnitudes using binoculars or opera glasses extrafocally. Some other observers in this area apparently do not use the extrafocal method and they got about a magnitude brighter for Comet Pereyra. Frankly, I don't know which method is really the best but at least if you stick to one method, you are consistent (more or less).

Thank you for your encouragement on trying to find Comet d'Arrest. You might be interested to know that I tried on this comet both in July and August but of course I was unsuccessful. Frankly, I got so disgusted at this point that I gave up and I didn't even make an effort in September. Now, naturally, Dr. Roemer has found the comet and I do not even know if I would have had a chance to find it in view of the fact that she reported it as 18th magnitude. Of course, she tends to estimate them fainter than I do so I might have had a chance but I guess I just wasn't up to it. The rigors of portable equipment just wear me out and I feel that I have to come back with <u>something</u> when I go out, otherwise acute frustration sets in. Frankly, after the horrible experience I had with Harrington-Abell, I find myself very reluctant to try and recover any more. It's hard enough anyway but with portable equipment it is even more difficult because often you cannot confirm your observations with enough care.

The real answer for portable equipment would be some large van type of vehicle which would have a dark room in which I could develope plates. With this sort of set up I could actually check them in the field and I would know what to do the next night. Also, when new comets appear, I could check the plate to see whether or not I would want to continue photographing them in the same manner. Unfortunately, such a van is both large and expensive and I wonder if I could get it up into the mountains where I go. Well, there must be some answer -- a permanent observatory! That's it ! Unfortunately, in this country, most of the land where you would want to have an observatory is owned by the Government and unless you belong to some special scientific organization or something like that, the land is unavailable to you. Enough of this moaning about observing problems.

It was good to hear from you and I must apologize for my delay in replying. Incidentally, I shall be looking forward to next year's B.A.A. Handbook to see what comets will be around. Of course, P/Encke will be in the vicinity and maybe it will be the brightest one of all. Last time it managed to produce a 2° tail so maybe it will still be performing this time.

of the periodic comets.

Sincerely,

Alan McClure

ALAN McCLURE

649 S. Olive, Room 819
Los Angeles, California
90014