Chapter 13: Sea-cliff Interferometry: Dover Heights, 1946
Joe Pawsey and the Founding of Australian Radio Astronomy- Early Discoveries, from the Sun to the Cosmos
Goss, W.M., Hooker, C., Ekers, R.D.
WM GOSS, NRAO mgoss@nrao.edu

ESM_13.2.pdf Fracas, Use of WWII Restricted Reports in 1946

The first Australian radio astronomy publication "Radio-Frequency Energy from the Sun"—*Nature,* 9 February 1946—created a minor fracas. The paper had four references: (1) Jansky's 1933 paper; (2) Reber's 1944 publication with a detection of the sun at 160 MHz; (3) the Stanley Hey Army Operational Research Group from 1945 with the detection of the sun by UK radar (4 to 6 metre) on 27 and 28 February 1942; (4) the Elizabeth Alexander 1945 report from RDL in Wellington, New Zealand, with the detection of the "Norfolk Island" effect at 200 MHz starting in March 1945. The latter two references contained the phrase "restricted report". Hey's name was not mentioned while Alexander's was included.

Prof A.V. Hill (1886-1977, Nobel Prize in Physiology-1922, and one of the founders of biophysics[1]) had been chair of the UK Committee (Committee of Post-War Publication) which was involved in the declassification of secret war time reports. Appleton, in his role as chair of the "Ultra Short Wave Panel" of the Ministry of Supply, complained about the two references in a letter to Hill on 4 March 1946. A bureaucratic tone characterises the text[2]:

> … I am raising with you the question of references to confidential reports in published papers. The matter arose from a recently published letter to *Nature* by Australian radio workers dealing with solar radio waves. In this letter, reference was made to British and New Zealand confidential reports on the subject although, in the British case, no prior reference had been made to the author of the report [or+] of his Ministry. The courtesy of the Australian workers (who had started to investigate the subject after the publication of the British and New Zealand reports) in wishing to acknowledge priority of the British or New Zealand works is, of course, much appreciated; but in the view of the Panel, such reference should have been preceded by a request for permission to quote the confidential reports in question.

[1] In April 1940, Hill (then a Member of Parliament in the UK) visited the US "to ascertain the American attitude toward the war and discreetly assess the potential usefulness of American science and technology to Britain's war effort." Hill suggested "an exchange of technological information, including data on radar ..." Hill and Lord Lathan (UK ambassador to the US) suggested to the UK government that they send a scientific and technical mission to the US. After discussions in the UK, the Tizard committee (including E.G. Bowen) arrived in the US and Canada in September 1940 (Eldridge, 2000).
[2] NAA C3830 A1/1/1 1945-1946 Part 1

On the same day, Appleton complained to White in Melbourne at the CSIR office (although Appleton did not realise that White had moved from Sydney in January 1945). He enclosed a copy of the letter to Hill:

> I am sure your people were only anxious to acknowledge prior work, but the effort has been a trifle unfortunate here. I have been much concerned with this solar noise myself and so know the history of it fully. Fortunately, my letter [*Nature*, 3 November 1945] and Hey's [12 January 1946] letter to *Nature* preceded the Australian one [9 February 1946], so no harm was done, as it turned out, so far as we were concerned; though I feel rather sorry about the New Zealand people who were the next to conclude that it was really radio [his emphasis] noise in their Norfolk Island experiments.

White was not impressed by the complaint as he wrote John Briton, the RPL chief, on 23 April 1946: "I am not quite sure what it is that Appleton is worried about." Later (30 April 1946), White wrote to Bowen (still the Deputy Chief of RPL): "Personally, I do not think it matters a great deal—It is only a formal point."

Bowen reacted strongly to White on 25 April 1946:

> I am sorry that Appleton is making a song and dance about our letter to *Nature*, but I suppose he is just expressing his well-known "ownership" of all radio and ionospheric work.
>
> Strictly speaking we were wrong in referring to confidential reports, for which we humbly apologise. Shall I address a letter to A.V. Hill to this effect or will you do it for us? [In the following days, White would write an apology to Appleton; Bowen would write to Hill.] Our excuses, if they are needed, are two in number—firstly that contained in Appleton's letter that we were most anxious to acknowledge prior work, and secondly that the material in the confidential reports was, in any case, quite well-known and had been discussed in various forms by many writers during 1945. [Reber, Southworth, Appleton's letter to *Nature* in November 1945].
>
> I quite fail to see the import of Appleton's other remarks, especially the one about being sorry for the New Zealanders, who at the time of writing their report thought that variations in solar noise might be connected to the weather.[3] I think Appleton is chiefly

[3] Bowen had misinterpreted the statements of Alexander in her letter of 23 November 1945 to Pawsey: "We've taken some measurements with Yagis [at Piha] and so had a look at the sun throughout the day. The aerial gain is too small to take measurements except when the radiation is very strong (as in the middle of October). Our results are not worth much so far but though the elevation of the sun makes little difference at times, at other times there does appear to be concentration at low angles which may be either an atmospheric or ionospheric effect or both." This letter was received well after the

> worried about claims of priority, which in fact we have never made. We would prefer the facts to speak for themselves, which are that, while many people have observed and reported noise from the sun and some have suggested a connection with sunspots, the Radiophysics Laboratory was probably the first to show a true connection with sunspot activity.

On 30 April 1946, White sent a *mea culpa* letter to Appleton:

> Both [Bowen] and I agree that we are extremely sorry if any of our people have done something they should not have done by referring to British and New Zealand confidential reports. That should certainly have been cleared with the right authorities before it was done, but as you yourself say it was a slip made because we wished to acknowledge prior work … [We started solar noise work after receiving news from Marsden in New Zealand of the Norfolk Island observations.] I think a full acknowledgement has been made of the New Zealanders' observations and, as far as I know, there are no hard feelings in that quarter.

A week later (7 May 1946), Bowen wrote a similar letter to Hill:

> … We were most anxious to acknowledge the priority of the British and New Zealand work, and, on the other, we were misled by the fact that while the contents of the two reports had become common knowledge, the reports themselves remained classified. I sincerely hope that this omission on our part can be overlooked and I will see that it does not occur again.

In the end, the Australians went to a lot of trouble to apologise and to justify their "mistake". If at the time the authorities in London still regarded the Australian scientists as secondary to the "experts" in the UK, it is unclear, but is likely. If the oversight made by Pawsey and collaborators in October 1945 had been made by British scientists, we suspect Appleton would not have reacted in this manner.

---

submission of the RPL paper on 23 October 1945; in addition, the Alexander report of 17 December 1945 discounted any major effects in the solar noise due to "weather".