

## **KCL Special Physics, 1964-67**

### **Some reminiscences**

Hi everyone. I was sorry not to have been at the 1964-67 Special Physics reunion in June 2014 which Ray Symes organised, but the upside was the opportunity to indulge in a bit of email nostalgia with him and Nigel Wood. Nigel remarked that it might be an idea to recast these recollections for a wider audience and send it to Will Howard for his excellent and entertaining website, so here goes.

My somewhat nerdy website about the organ ([www.pykett.org.uk](http://www.pykett.org.uk)) does have the incidental advantage that it seems to enable people to find me fairly easily. So continuing the thread about Nigel for a moment, we have had one or two discussions over the years since 1967, such as when he noticed my entry in the visitors' book at St Keverne church in Cornwall - I had been playing the organ and not long afterwards I think he was doing the southwest coast path and stopped by there. Quite a coincidence. (Nice pub, The Three Tuns, next door). I remember and always liked his quirky sense of humour and (if he will forgive me) I felt he danced to a slightly different drum, which I willingly admit to myself. I still retail his hilarious take on my name ("do-it-yourself pork pie kit") at dinner parties and the like! I also think it might have been Nigel who referred to himself as Civet Cat? If not, apologies again, but somebody in our set did.

During our correspondence Nigel remarked that that some aspects of the KCL syllabus still evoke astonishment - old fashioned even by 1960s standards, and often off-syllabus. I do so agree. There were even examples of exam questions which had been set by our own lecturers which they had omitted to cover. Does anyone remember the time a few days before the exam in June 67, when Chapman recalled those taking the 'Advanced Electricity and Electronics' option so he could instil Circle Diagrams at high speed into our receptive minds? The relevant question did duly appear and can be seen here on Will's site. Pretty disgraceful really though. Remember the vulgar hilarity whenever he asked "any queries?" in his rather hooty voice? I don't think he ever got it - "got it?" of course being another favourite aphorism of his which we naturally mimicked.

Then there was Jones and his electronics which was mainly valves - oh my days, I and no doubt others in our mob had been building stuff for years previously at school which was fully transistorised, and even integrated circuits were beginning to creep in by then. It was mainly left to Claude Curling (a very nice man I always thought) who strove to bring us into the solid state era.

Prof Price was a whiz with the chalk though, and he had an unerring aim when the gossiping and fidgeting in the ranks finally got the better even of his equable temperament (no, I don't think it was meant for me).

There were of course upsides though. I still feel privileged to have had that final-year exposure to biophysics under Randall (he was a co-inventor of the cavity magnetron, for heavens sake, during WW2 but I never knew that until after I had joined the Royal Radar Establishment in 1971). And after the war he almost casually turned to biophysics and made his name there as well. Blimey! Polymath or what? Then of

course there was Nobel Laureate Maurice Wilkins, in the thick of it with Watson, Crick, Rosie Franklin and co only a few years earlier with the DNA battles. Dear, quiet and kind old Stokes was also among that elite bunch in the 1950s, but again you would never have known it if it was left to him. And Watson Fuller was quite the best lecturer of the lot of them in my opinion, not only in biophysics but across the whole department. His copious sheaves of typed notes and diagrams which he distributed to all at his lectures were pretty impressive, especially when you recall he had no word processor at his disposal, and even Xerox machines were only appearing slowly in the department at that time.

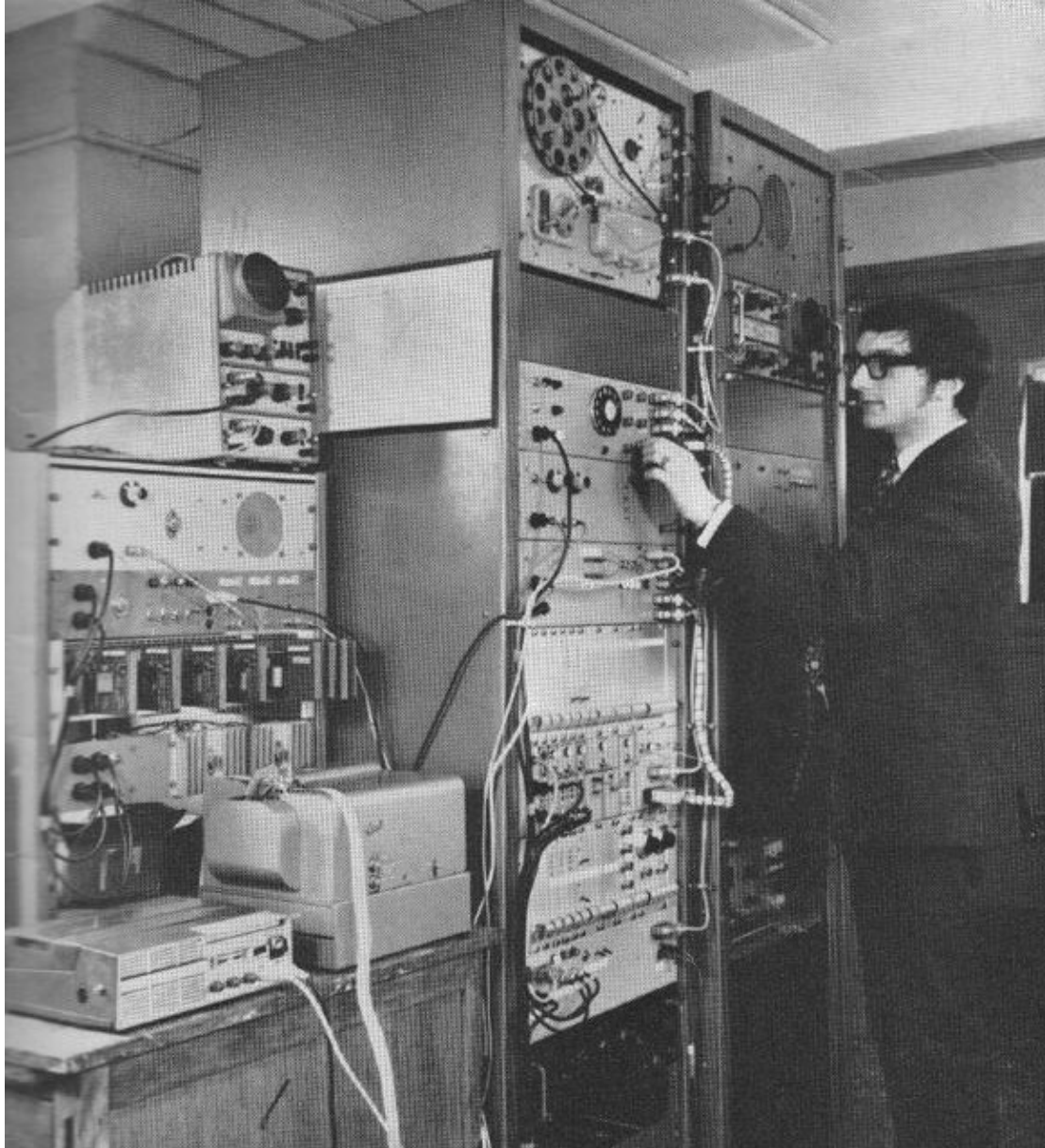
I also value the thorough grounding in classical physics we got at Kings. It is still so very useful to a practising physicist in industry (which is effectively where I ended up) as opposed to academia. Today I'm afraid I find so many of the following generations to be intellectual sloths and scientifically illiterate. What they can't find in Wikipedia they never learn, and much of that is wrong. Many of the young graduates when I was still in harness could barely analyse a simple circuit at the level of Ohm's and Kirchoff's laws. And useful relationships such as those between energy, momentum and force seemed to have completely passed them by, despite the fact it's not much more than O-level stuff as we would term it

But being critical again, the thing I find most appalling with hindsight (though not at the time, curiously) was the complete lack of pastoral care for the students. I doubt this could happen at any university today, fortunately. I was absent for months in the second year and could have died for all anyone cared (and nearly did, with appendicitis), but nobody in the department even noticed. The worst aspect was that I only managed a lower second at part 1, but fortunately managed to crawl back to a first at finals. That was partly because of the final year specialisms available which matched my inclinations and aptitudes to a tee.

That degree meant I was able to stay on in Chapman's radiophysics group after graduating, which I found far more satisfying and fun than the undergraduate years. There was little pressure other than that which was self-imposed, and it was entirely up to you whether you got the degree or not. There weren't many from our year who stayed on to do experimental physics as I recall (somebody please correct me if I am wrong), but several did theoretical physics under Domb and Sykes. I remember our old buddies Pete Fox, Pete Roberts and Mark Watts perched in some faded former hotel room in the Chesham poring endlessly over reams of lineprinter output. And to get to them from the main building without going outside, one had to navigate the most unbelievable labyrinth of corridors and stairs. Almost Dickensian. Remember that route anybody? I had to do this if I wanted them as drinking companions at the end of the day - almost all postgrads got in late and went home late, as well as not a few of their supervisors on their non-lecturing days. As a postgrad I also had the (very) minor distinction of appearing in the 1970 Physics brochure - see the attached photo. The legend read "*Apparatus for the spectrum analysis of ultra low frequency variations of the geomagnetic field*". I've also scanned some other pictures from that booklet which appear at the end, one of them with a good photo of Prof Price.

Now there was another nice man. I remember once putting in for an advance to cover travel and lodgings prior to a field trip to Cornwall (Goonhilly Downs) - I had to go there to find a quiet enough environment to record geomagnetic whispers from the

solar wind - but the application got lost and I had no money the night before departure. Going down to the Wheatstone Lab I came across Price, explained the problem, and he just wrote me a personal cheque. He got it back of course, but not all heads of department would have done that for an impecunious student.



I don't think Curling did any research and when I was a postgrad I observed him taking a close supervising interest in the undergraduate labs and their support staff, which was of course a Good Thing. Once he asked me during that time if I would design a new experiment on DC power supplies to replace the outdated and potentially lethal one which threw out 350 V or so (valves again!). The issues for the students included plotting load lines, etc. So I did and he endorsed it, complete with my write up for the undergrad's typed-up handbook. But they apparently hated it! It involved them having to solder things together, which Claude thought would add to their interest, but obviously it did not. What did Churchill say - you can't please all of

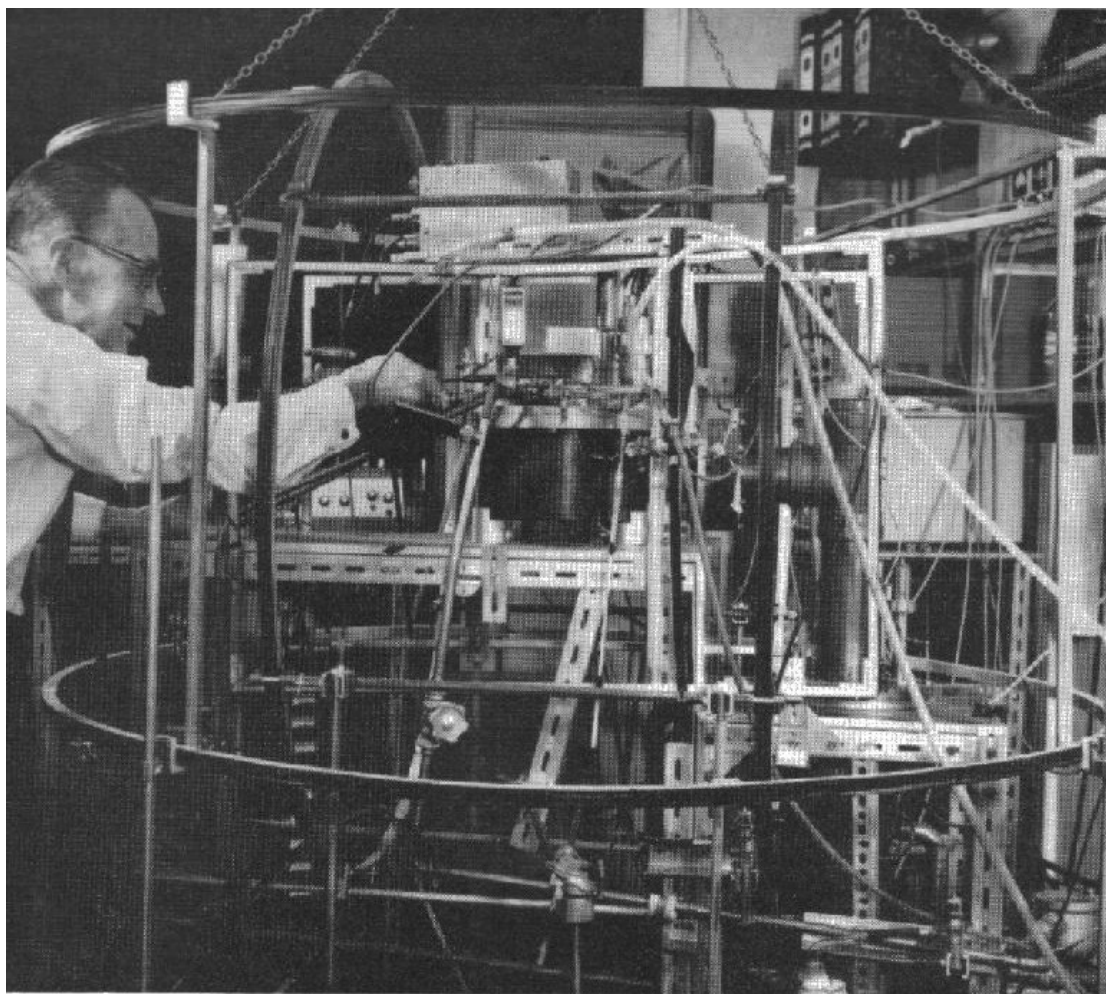
the sods ... ? At least it was much safer though, only delivering 15 V or so for driving solid state circuits.

Re the old subterranean Wheatstone Labs, I wonder if Charles's old telegraph wires are still there in the deepest basement? I never saw them because I was not aware of their existence when I was still at KCL, but being active in the field of early telegraphy he apparently laid the wires down c. 1840 to investigate why Morse signals got distorted when the line lengths were long. Resistance, self-inductance and capacitance and all that. As this area is apparently to be revamped, hopefully this bit of our technical heritage will be preserved if it is still there. It was after all one of the precursors to another famous alumnus, Maxwell, and the transmission line theory which came after his equations. And Wheatstone also invented the Concertina as well. Did anyone hear faint echoes of ghostly music when they did their impromptu tour of the area during the reunion, I wonder?

All the best.

Colin Pykett  
June 2014

Some pictures from the KCL Physics Dept Brochure, 1970

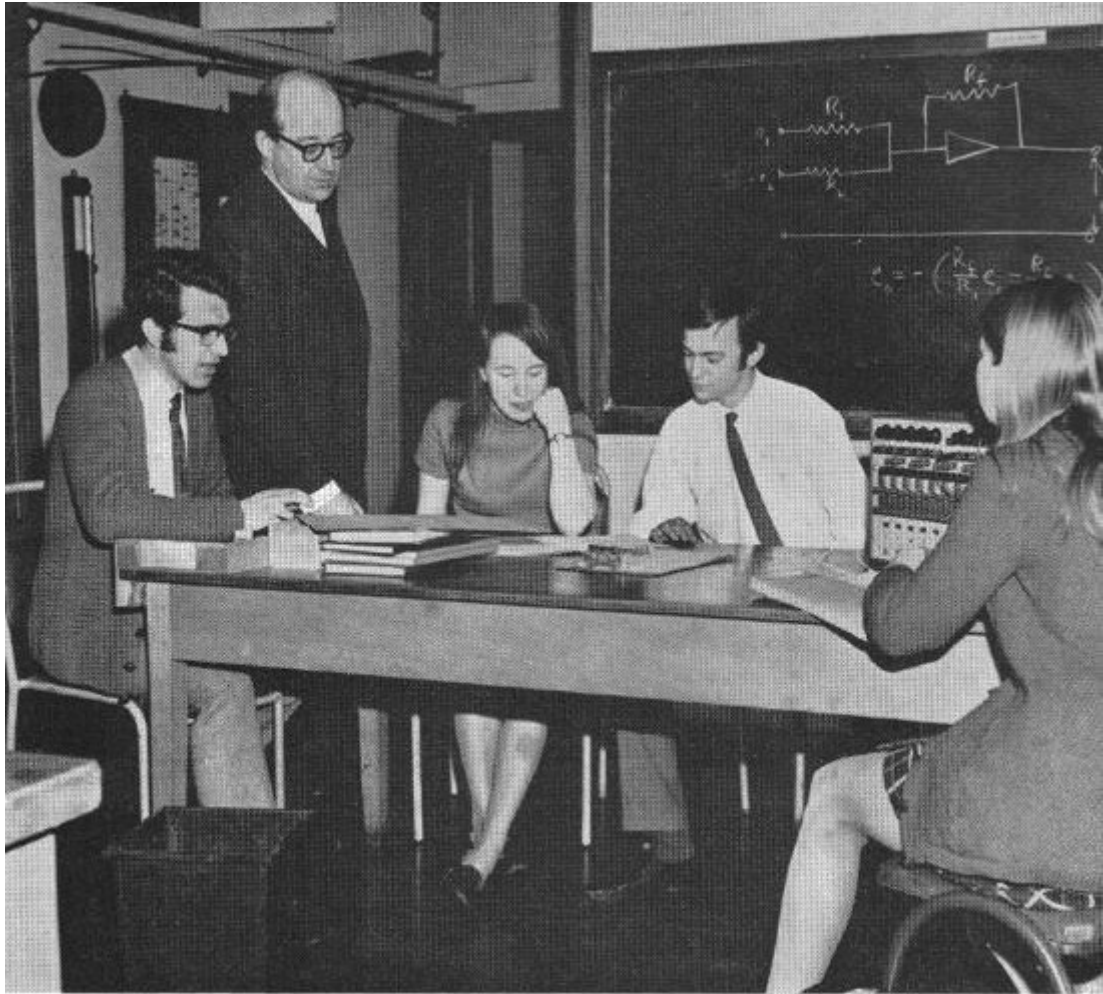


*high resolution photoelectron spectrometer used for the  
termination of the energies of molecular orbitals*

**Professor W C Price (1909-1993)**

**Wheatstone Professor 1962** (and subsequently Professor Emeritus)

(The unfortunately truncated caption actually reads “A *high resolution photoelectron spectrometer used for the determination of the energies of molecular orbitals*”)



*An undergraduate physics tutorial*

(I think the tutor was Seweryn Chomet, 1930-2009)



*One of the practical physics laboratories*

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