CRUICKSHANK, DR. F.D.

1927 Student course
Prof. T.T. Flynn and other staff in Science Faculty.
Regular half-year absence of Prof. Flynn at Queens Univ.,
Belfast - an official arrangement under terms of appointment
as Ralston (?) professor

Professor McAulay Physics Dept
"very little research done in university as a whole" apart
from Flynn and McAulay
Deliberate building-up of research school by McAulay,
despite very small budget

Dr Philip Boden did beginnings of his research here - became
renowned worker at Cambridge thereafter

Electrolytic Zinc Co. for one year (1926) before going
to university. Drawings and figures for Boden's thesis done
by F.D.C.

Appointments as Senior Demonstrator in Physics (1930)-
typical of Prof. McAulay's way of acquiring staff. Authorities not
so keen on this method of acquiring staff from own student
body. But a homogeneous team built in this way.

1930- Physics Dept staff of two, plus one in workshop.
Budget of two hundred pounds. Details of improvisation.

F.D.C's experience of running the Physics Dept single-handed
in 1932, owing to tragic personal experience of Prof. McAulay,
(2nd wife drowned in boating accident on honeymoon) necess-
itating 12 months' leave.

Lecturing to 1st 2nd and 3rd years. Prof. McAulay's "lecture
notes"

1934 financial crisis in university. "The university had
many enemies in the community". Govt reduced grant.

Response of professorial staff to crisis: professors voted
that no one should be retrenched from teaching or adminis-
trative staff. Voluntary salary reductions of 20% for themselves
with graded reduction for other staff members. Professorial
800 pounds reduced to 640. F.D.C's salary reduced 10%

Research work being carried out by Physics Dept. Building
of glass house by staff and students - no other way of
achieving it, then.

Effect of war on research work. Telegram from Essington
Lewis, Director of Munitions, re optical project

Telegram said: "Aust. critically short of optical compo-
nents for gun sights. McAulay's telegram in reply: "Send one hundred
pounds and we will begin work."

Analysis of McAulay, who described himself as a "fast, rough
worker." An ideas man.

Role of Eric Waterworth

The development of the Optical Annexe

Formal laboratory work for 3rd year students scrapped, in
favour of problems relating to optical processes. Details
of work; tremendous speed of achievement

The laboratories were virtually factories

Expansion into new building (1941?) Battles and difficulties
are a building on university site for non-univ. purposes
2 shifts per day - 140 up to 200 workers - supervision by
staff and students of physics dept

155 F.D.C.'s own workload: 7.30 a.m. first shift, then
lecturing until 5p.m., then back to annexe until 11p.m.

180 MoA's attempt to establish a 3rd shift failed - himself
brought to verge of collapse

195 Optical Munitions Panel was established with members
from all universities involved in optical instrument pro-
duction. Decision taken that manufacture of aircraft
camera lenses be undertaken at Melb. Univ. only. Profi
MoA. immediately - privately - started work, and after two
months they had made a lens. Details of theoretical work
involved.

335 Difficulties owing to limitations on types of glass
available in Australia at the time

345 MoA. goes to later meeting of panel in Melb. with the
newly-produced lens in his pocket. Told at meeting that
ship with 400 lenses for RAAF had been torpedoes; RAAF
practically without lenses. Chairman emphasised
urgency, MoA produced lens from pocket - great moment!

395 Details of types of lenses produced

425 Publication of work after war when restraints lifted

Tape 2

Side A

?The arrival of H.A. Buchdahl (?) from Hay prison farm;
seconded to Physics Dept. He had been educated in London,
at school and university, but was interned as enemy alien
A brilliant theoretical physicist "once he had overcome
effects of treatment and conditions at Hay".

065 Optical aberration expansion, and Buchdahl's solution
to problems of 5th and seventh order terms. Published in
1954.

995 University should have offered him Chair in Theoretical
Physics. He was "a loner and maybe a little impatient with
shortcomings of students".

Appointed to Chair of Theoretical Physics at N.U. F.D.C.
unwilling to answer when asked why B. not offered Chair in
Hobart.

155 In 1954 the Dept of Supply established an Optical Mun-
tions group, basis of an industry to ensure that supplies
would be available in any future war. Research money made
available for training of students. Project of Optical
Institute at Univ. of Tasmania, funded by Commonwealth.

When plans were at last stage, almost finally, there was
a change in govt policy and the project lapsed.

210 Advent of computer brought tremendous changes in this field.
Example.

240 Smallness of university - close relations between staffand
students.

Tribute to Sir John Morris for "bringing university out of
the doldrums"

260 Close-knit physics Dept, and until end of war all appoint-
ments were "from our own students". Students with problems
"heard and helped on the spot".

300 Post-war development of study leave rendered isolation
unimportant

335 MoA. in Physics Dept for forty years. Tribute to Lester
McA for instinct in selecting people and building a
department. A great fighter for his staff. He was strong protagonist for Sandy Bay site. Physics Dept first to arrive at site, in 1946

Side B  000 to 030 only