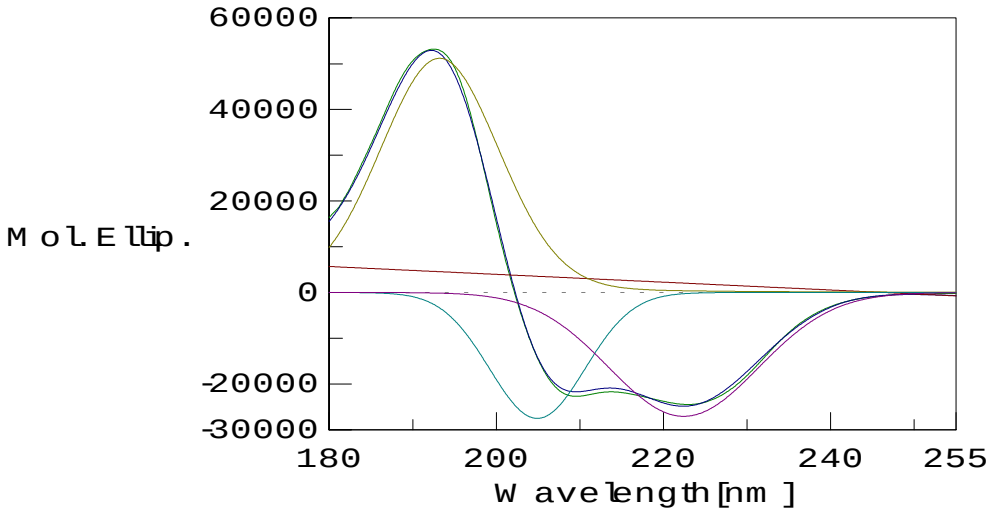
TECHNICAL REPORT N° 47 **September 2001**

PEOPLE: HOLZWARTH

George M. Holzwarth may be not a so familiar name for new CD spectroscopists, but at time he was involved with CD he gave substantial contributions to the technique.
Prof. Holzwarth got BA in physics at Wesleyan University in 1959 and his PhD at Harward University in 1964.
His PhD thesis[1] was extensively dealing with CD measurement techniques of his early times.
Only one year later another major contribution[2] in the study of circular dichroism of polypeptides: he assembled a CD spectrometer using a Beckman DK-2A absorption spectrophotometer fitted either with quartz polarizing prism and quartz retardation plate in sample beam or with an electro-optic plate (Pockel cell) in a way not to far from today instruments.
He was suggesting that α-helical polymers spectra could be fitted with three bands centered at 222 (n_1-π^-), 206 and 190 (π^0-π^-) nm.
Figure below shows indeed the fitting of a Myoglobin spectra run on a modern unit with three curves as suggested by the author using the curve fitting program (JWCVF-485) of the Jasco J-810.



Not bad isn't?

What's really outstanding in this article is also the care about possible errors, far ahead what we can read on current literature, where the trust on the hardware is rarely questioned.

But his contributions continued for several years, he was leading a team who developed an early VCD unit:
a PhD thesis of one of his students[3] is still today a source of an exciting reading.
Later on Prof. Holzwarth moved (unfortunately for CD community) into other scientific fields, but his recent activities[4] are still dealing with polarization-modulation techniques in differential-interference contrast microscopy with CCD camera.
A new potential direction also for CD hardware, why not?

He is still active at Department of Physics of Wake Forest University, e mail gholz@wfu.edu

[1] Holzwarth G. M., *PhD Thesis*, Harvard Univ. (1964)
[2] Holzwarth G., Doty P., *JACS*, 87, 218 (1965)
[3] Chabay I., *PhD Thesis*, Chicago Univ. (1972)
[4] Holzwarth G. M., Hill D. B., McLaughlin E. B., *Appl.Opt.* 39, 6288 (2000)