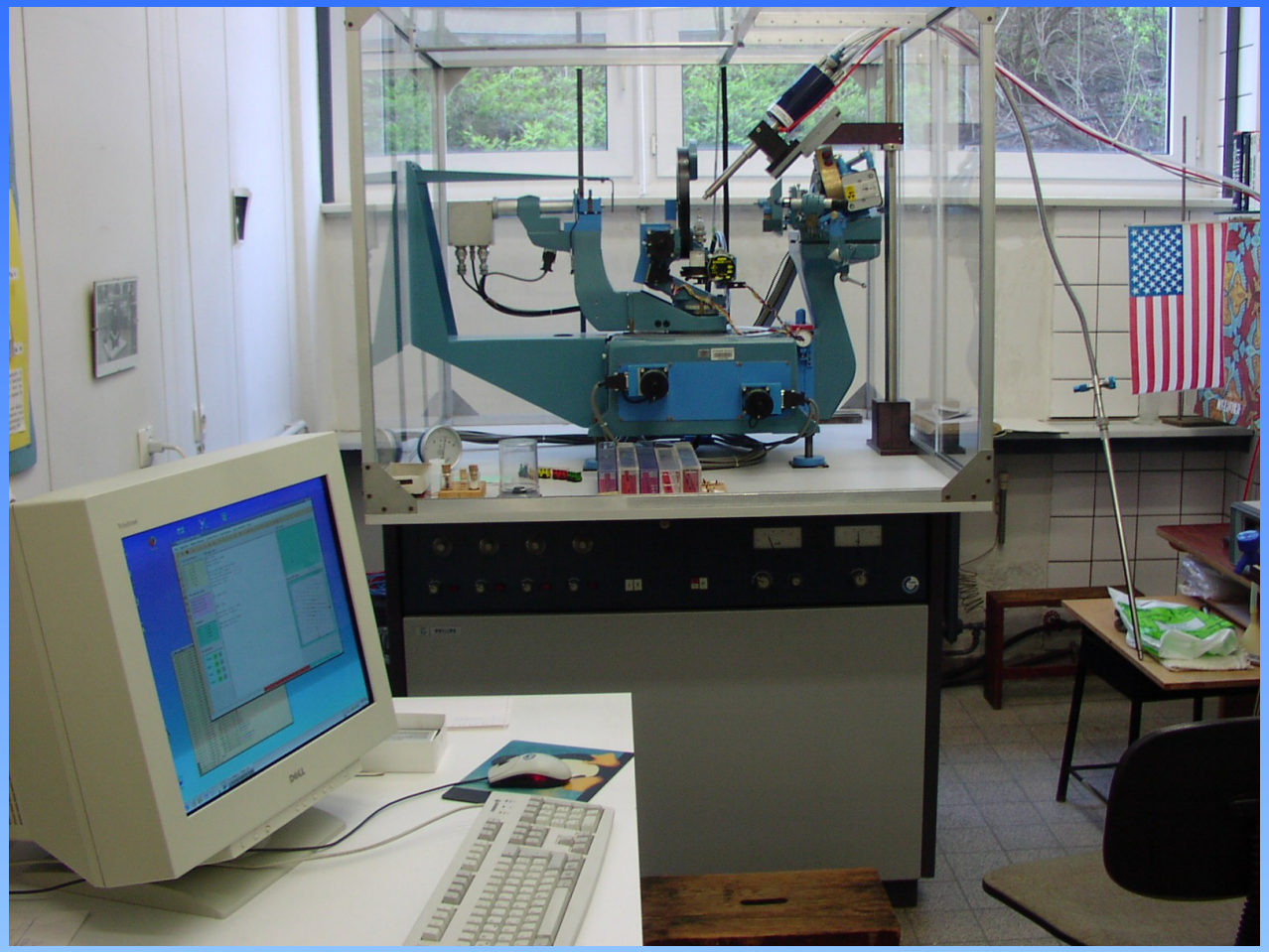
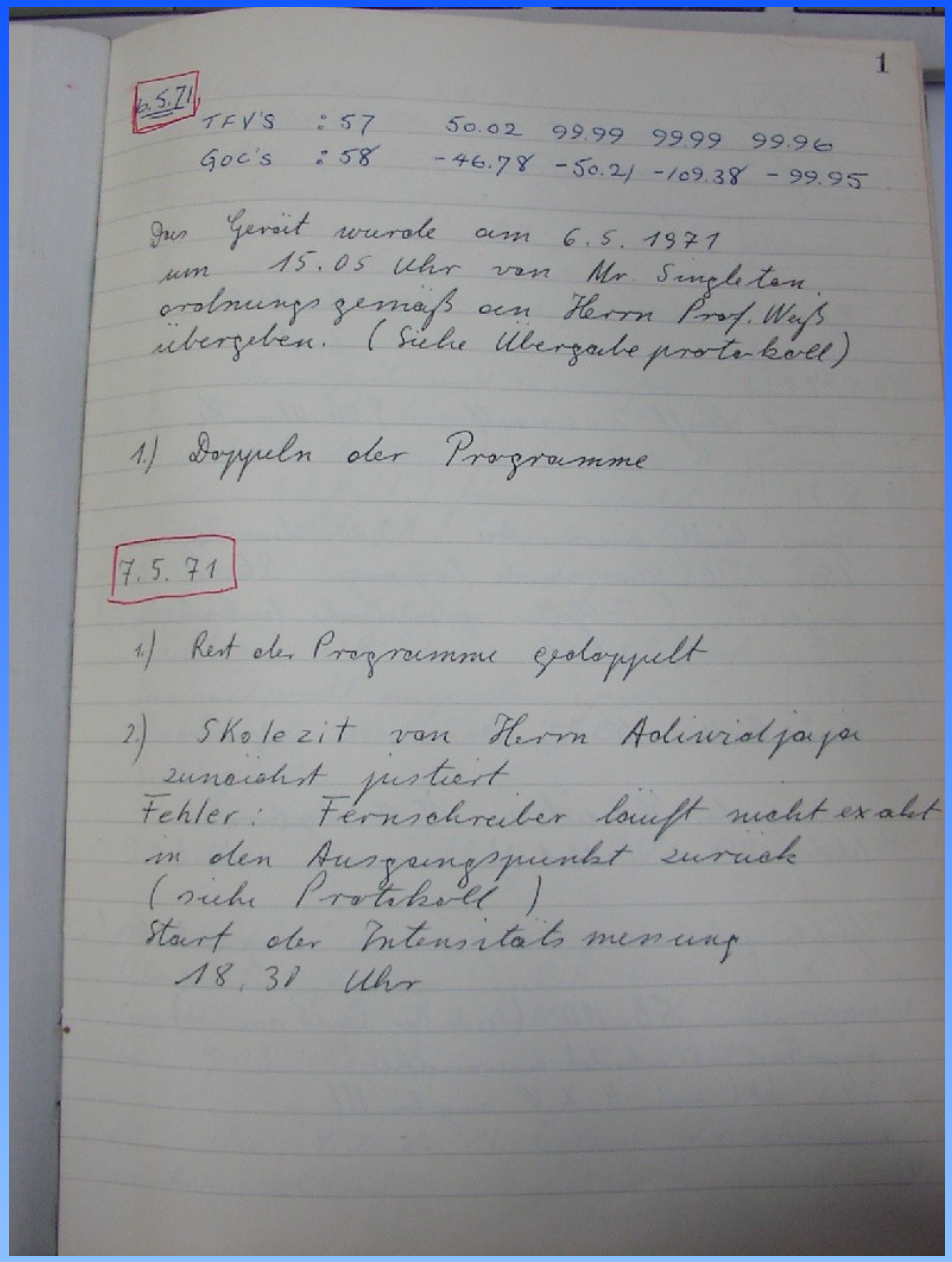
35 Years Hilger & Watts (Y290)



The Hilger at about October 2006 after 35 years.



1

6.5.71

TFV'S : 57 50.02 99.99 99.99 99.96
GOC'S : 58 -46.78 -50.21 -109.38 -99.95

Das Gerät wurde am 6.5.1971
um 15.05 Uhr von Mr. Singleton
ordnungsgemäß an Herrn Prof. Weiß
übergeben. (Siehe Übergabeprotokoll)

1.) Doppeln der Programme

7.5.71

1.) Rest der Programme gedoppelt

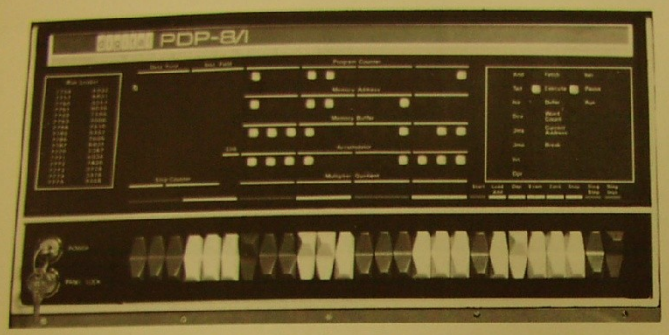
2.) SKolezit von Herrn Adlwirdjaya
zunächst justiert
Fehler: Fernschreiber läuft nicht exakt
in den Ausgangspunkt zurück
(siehe Protokoll)
Start der Intensitätsmessung
18.31 Uhr

First entry in our log book

Our Teletype ASR 35

The first official picture of our Hilger & Watts about 1973

Computer panel

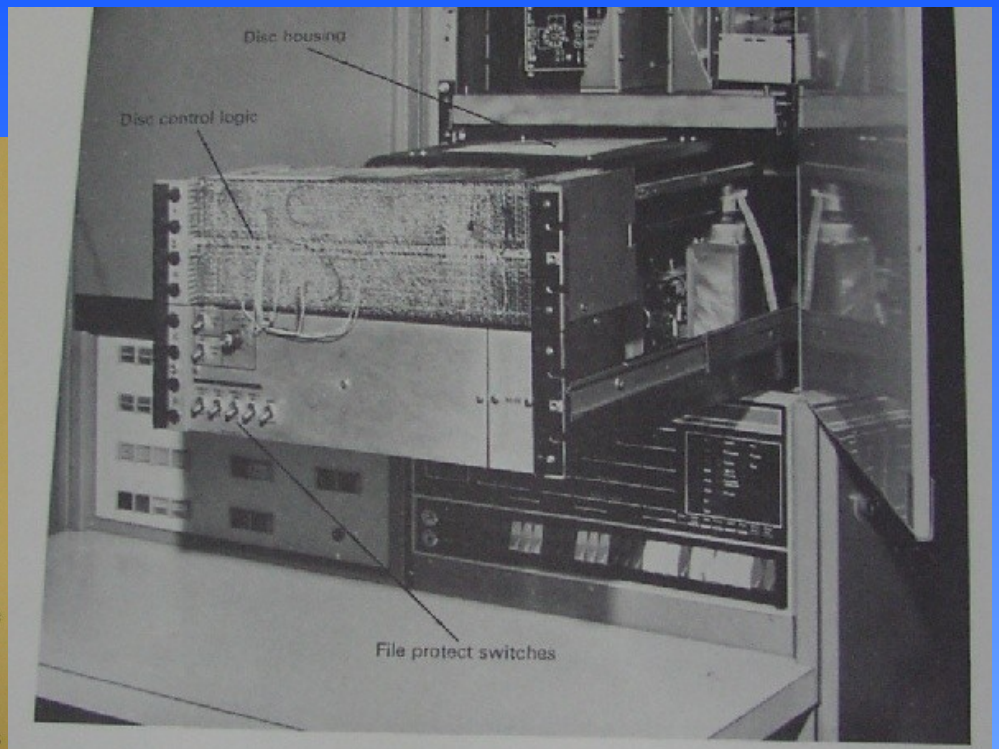


Computer

The PDP-8/1 is a compact general-purpose computer of integrated-circuit construction. It controls the whole operation of the diffractometer and associated equipment when automatic run is selected, and is connected to the instrument through an interface housed in the operating console adjacent to the computer.

The computer provides a versatile high-speed unit for performing the calculations involved in the experiment, and for the real time control of the diffractometer. It has a basic 4096 word core memory, with a 12 bit word. The memory is expandable and a wide range of peripheral equipment is offered by the manufacturer. As the computer is unmodified in the diffractometer application, any of these peripherals can be utilised.

Our first own computerer



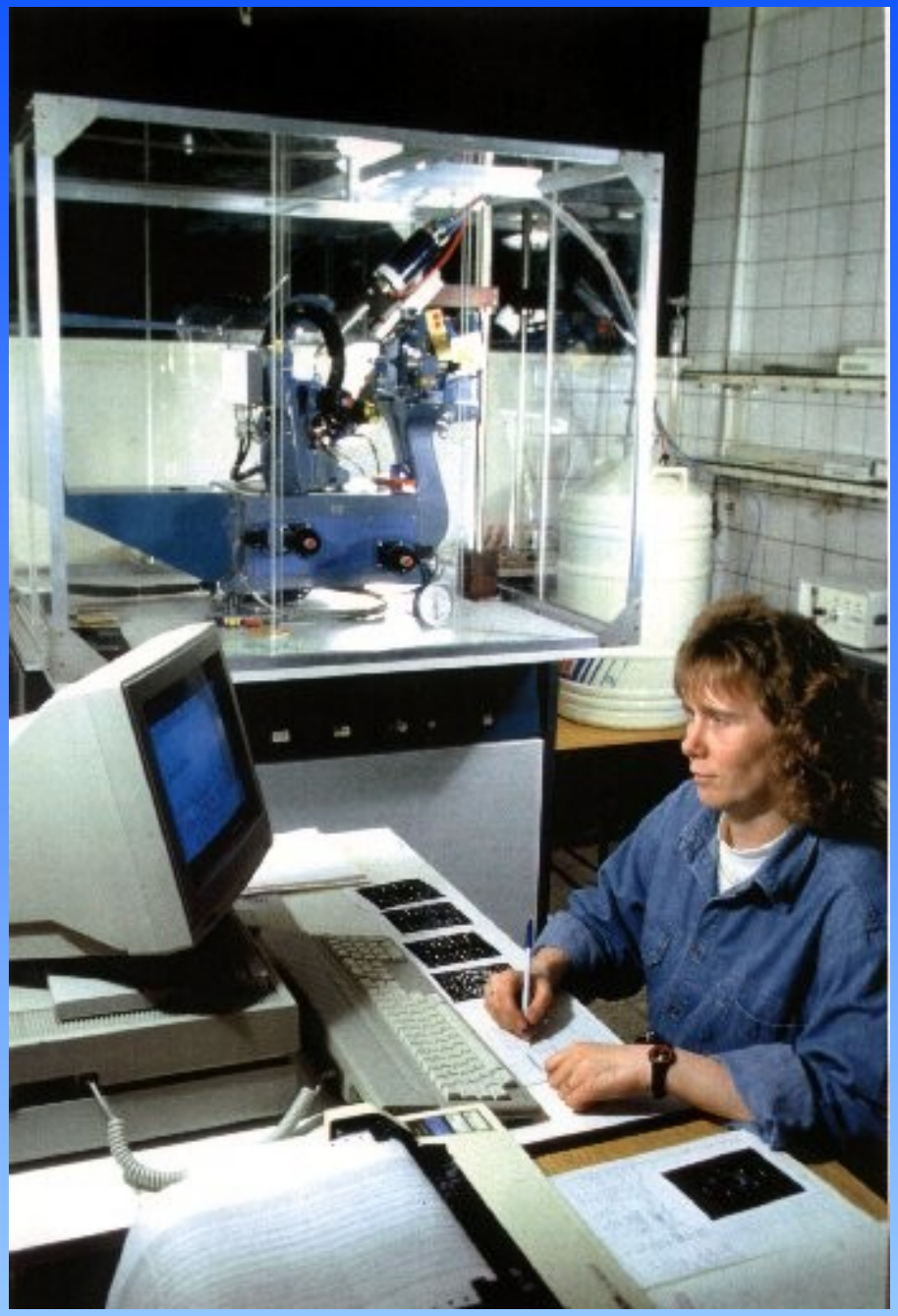
The compact FA8238 *Random Access Disc File System* fits into the control console of the Y290. The software gives an eight-times effective increase in memory capacity from 4K to a big 32K with the PDP8 series of computers.

DF 32 disc built in Dec. 1971

The complete system at about 1983

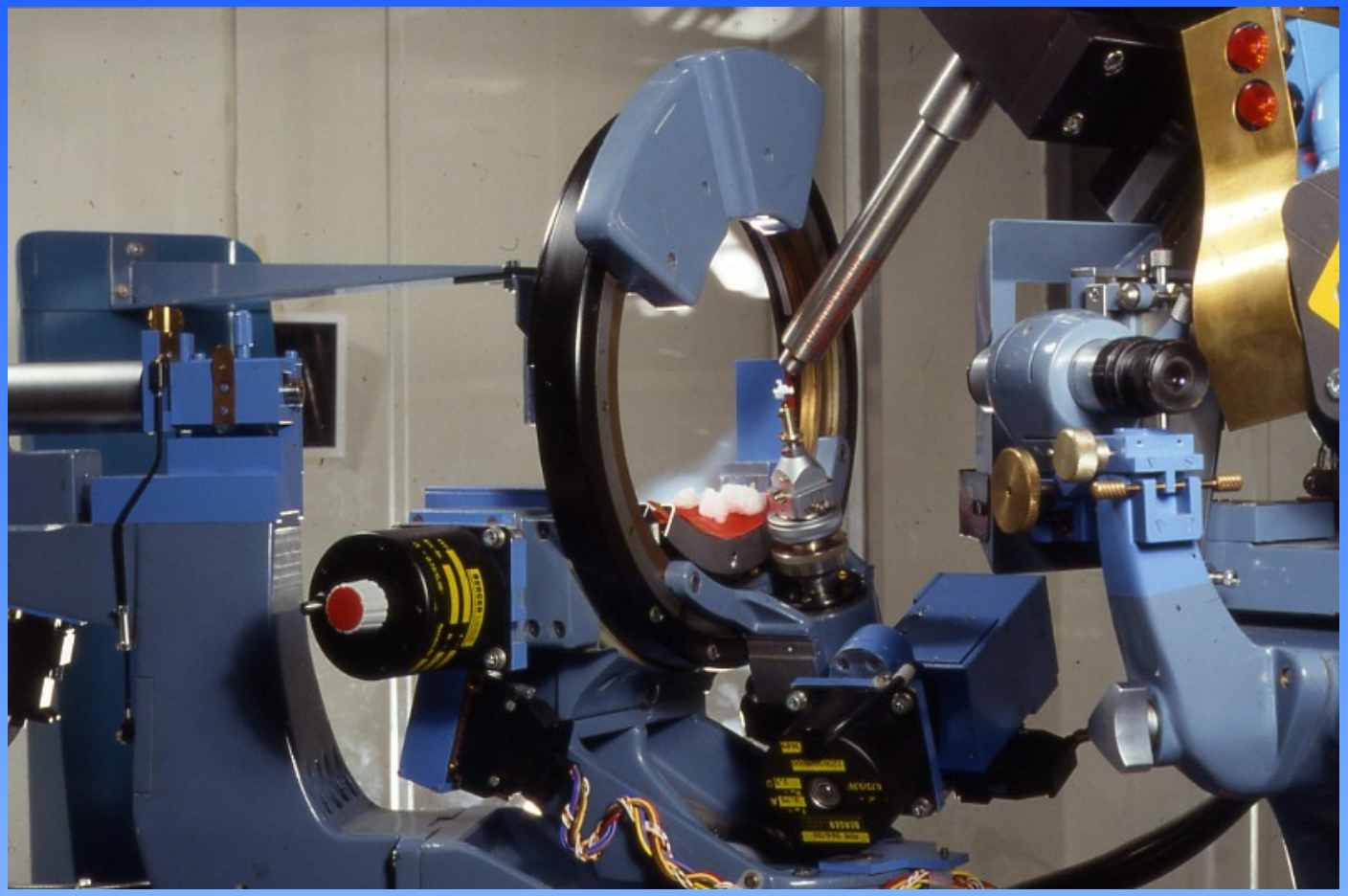
PDP 8E a present of Prof. Klaus Brunnstein

Ansgar Weidner in the security hood, at about 1987



Mrs. Bretzke with the Atari Mega ST2 at about 1993

The new interface:
A development of
Hans Neugebauer



The Hilger with low temperature device and the new stepper motors replacing the Moiré fringe system.

Control Program for Single Crystal Diffractometer: The Use of the Qt C++ Class Library

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Abstract

In this paper I describe a new "open source" control program for single crystal diffractometer. This program has been developed to control a very reliable Hilger & Watts (Y290) four circle diffractometer, first installed in 1971. A second version was developed for a Syntex $P2_1$ diffractometer. The new control software is completely written in C++ using the Qt class library, maintained and distributed by the Norwegian software company **Trolltech** [1].

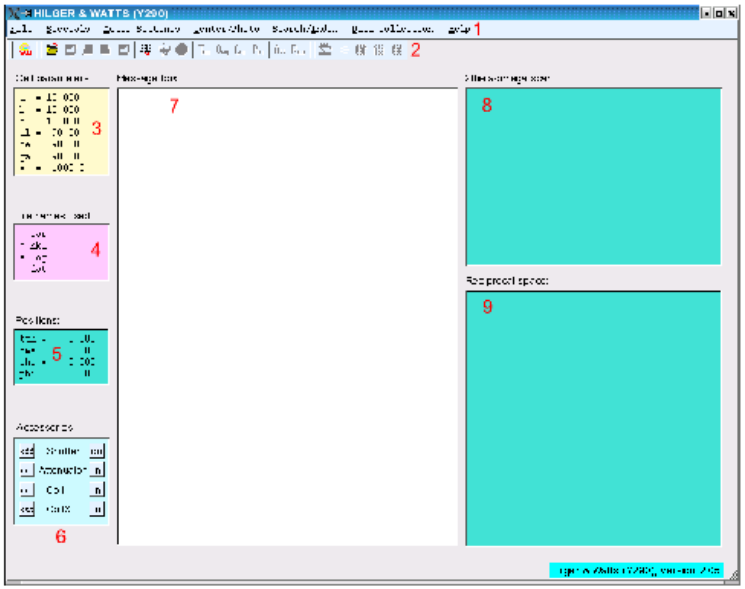

Fig. 1: Screenshot of program **Y290** just after the start of the program. Red numbers are inserted into all figures for explanation of important features of the program.

Introduction

Over the past decade I have been developing single crystal diffractometer control software that uses easy to learn pull-down menus, dialog-boxes and file-selector-boxes. The program **Y290** was

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- Mrs. Isabelle Nevoigt and
- Mrs. Cornelia Bretzke.