

Inside Story

Glass, copper, pen and ink

Jan Hladký, a member of ALICE, is an artist whose pictures may seem familiar.

Jan Hladký has been working in particle physics for more than 50 years as an experimental physicist at the Institute of Physics of what is now the Czech Academy of Sciences in Prague. Over the years he has had the opportunity to attend conferences in various countries, and each time he goes he takes pen, ink and watercolours so that between sessions he can capture the essence of the place that he is visiting. His sketches are probably best known from the covers of some of the proceedings – the 1987 “Lepton–Photon” conference, for example, has a classic view of Hamburg.

Hladký grew up in a place some 50 km from Prague, where his mother’s family had inherited a castle – rebuilt in 1777 by Empress Maria Theresa. With its frescos and sculptures the castle provided an artistic influence, while family members had an interest in both art and science. His father was a doctor but kept many art books and an uncle was a professor of thermodynamics and a member of the Czech Academy of Sciences and Arts. Born in 1934, much of Hladký’s later childhood was overshadowed by the Second World War and the subsequent communist take over of his country, but a teacher at his secondary school also fostered in him a serious interest in art.

Following the family’s scientific interests, Hladký graduated as an engineer at the Agriculture University in Prague but at the same time studied physics at the Charles University, before joining the Institute of Physics in 1957. His work took him first to the cosmic-ray observatory of Lomínký Peak in the High Tatras mountains. In the 1960s he became a visiting scientist at other research centres, in particular JINR in Dubna, where he obtained his PhD.

The political climate in then Czechoslovakia chilled noticeably after the “Prague spring” of 1968, and from 1970 Hladký was refused permission even to visit JINR. His position in the Institute of Physics became unclear, mainly because he was not a member of the



From the exhibition at CERN. Bottom left: Jan Hladký with Old Preprints (glass). Top: Strange Resonances (glass and copper), a topical subject. Bottom right: Sendai (1986), to whose people the exhibition was dedicated.

Communist Party. However, art was still allowed as a free profession, so he kept up his interest – in part to have a profession “in reserve” should he lose his post in physics.

It never came to that, but Hladký continued his art and found enjoyment in creativity during two decades when he had little direct contact with experiments or collaboration members in particle physics. Two exceptions in the 1980s were a visit to CERN for a month at the start of the NA4 experiment (he was head of the group at the Institute) and one to Sendai, Japan, for Neutrino ’86 (allowed because Japan is not in the West).

During all of this time, Hladký had developed his own style of sculpture based on recycled materials, in particular glass, but also, for instance, copper that was no longer needed by experiments at Dubna. During the 1970s he began using broken

glass from a factory near his father’s house – an interesting “twist” on the high-class Bohemian crystal of his home region – and in 1987 he was accepted as a member of the glass section of the Syndicate of Czechoslovak Fine Artists for this “new direction” in Czech glass work.

With the fall of the Iron Curtain, Hladký could travel once again and from 1990 often visited DESY as a member of the H1 collaboration on the HERA collider. He has also attended many conferences, from Jerusalem to London to New York. He has organized exhibitions of his work in several of these places, most recently at CERN at the end of April. He dedicated the exhibition to the victims of the recent earthquake and tsunami in Japan, one of the few places he had been able to visit in the 1970s.

● Christine Sutton, CERN.

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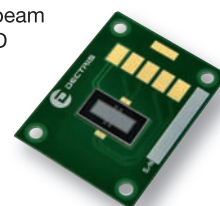
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Digitizers Selection Table

Model ⁽¹⁾	Form Factor	N. of ch. ⁽⁴⁾	Max. Sampling Frequency (MS/s)	N. of Bits	Input Dynamic Range (Vpp) ⁽⁴⁾	Single Ended / Differential Input	Bandwidth (MHz)	Memory (MS/ch) ⁽⁴⁾	DPP firmware ⁽⁵⁾
x724	VME	8	100	14	0.5 / 2.25 / 10	SE / D	40	0.5 / 4	TF
	Desktop/NIM	4 / 2				SE			
	PCIe	2				SE			
x720	VME	8	250	12	2	SE / D	125	1.25 / 10	CI, NG
	Desktop/NIM	4 / 2				SE			
	PCIe	2				SE			
x721	VME	8	500	8	2	SE / D	250	2	no
x731	VME	8 - 4	500 - 1000	8	2	SE / D	250/500	2/4	no
	PCIe	2				SE			
x751	VME	8 - 4	1000 - 2000	10	1	SE / D	500	1.8 / 14.4 - 3.6 / 28.8	NG
	Desktop/NIM	4 - 2				SE			
x761	VME	2	4000	10	1	SE / D	TBD	7.2 / 57.6	no
	Desktop/NIM	1				SE			
x740	VME	64	65	12	2 / 10	SE	30	0.19 / 1.5	no
	Desktop/NIM	32							
x742	VME	32+2	5000 ⁽²⁾	12	1	SE	500	0.128 ⁽³⁾	no
	Desktop/NIM	16+1							

(1) The x in the model name is V1 for VME, VX1 for VME64X, DT5 for Desktop and N6 for NIM

(2) Sampling frequency of the analog memory (switched capacitor array); A/D conversion takes place at lower speed (dead-time)

(3) The memory size for the x742 is 128/1024 events of 1024 samples each

(4) The indication "size 1/size 2" denotes different options

(5) DPP-TF: Pulse Height analysis (Trapezoidal Filters), DPP-CI: Charge Integration (digital QDC), DPP-NG: γ -n Discrimination

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June 19 - 24, 2011

ICPP-Istanbul II - 2nd International Conference on Particle Physics

June 20 - 25, 2011

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