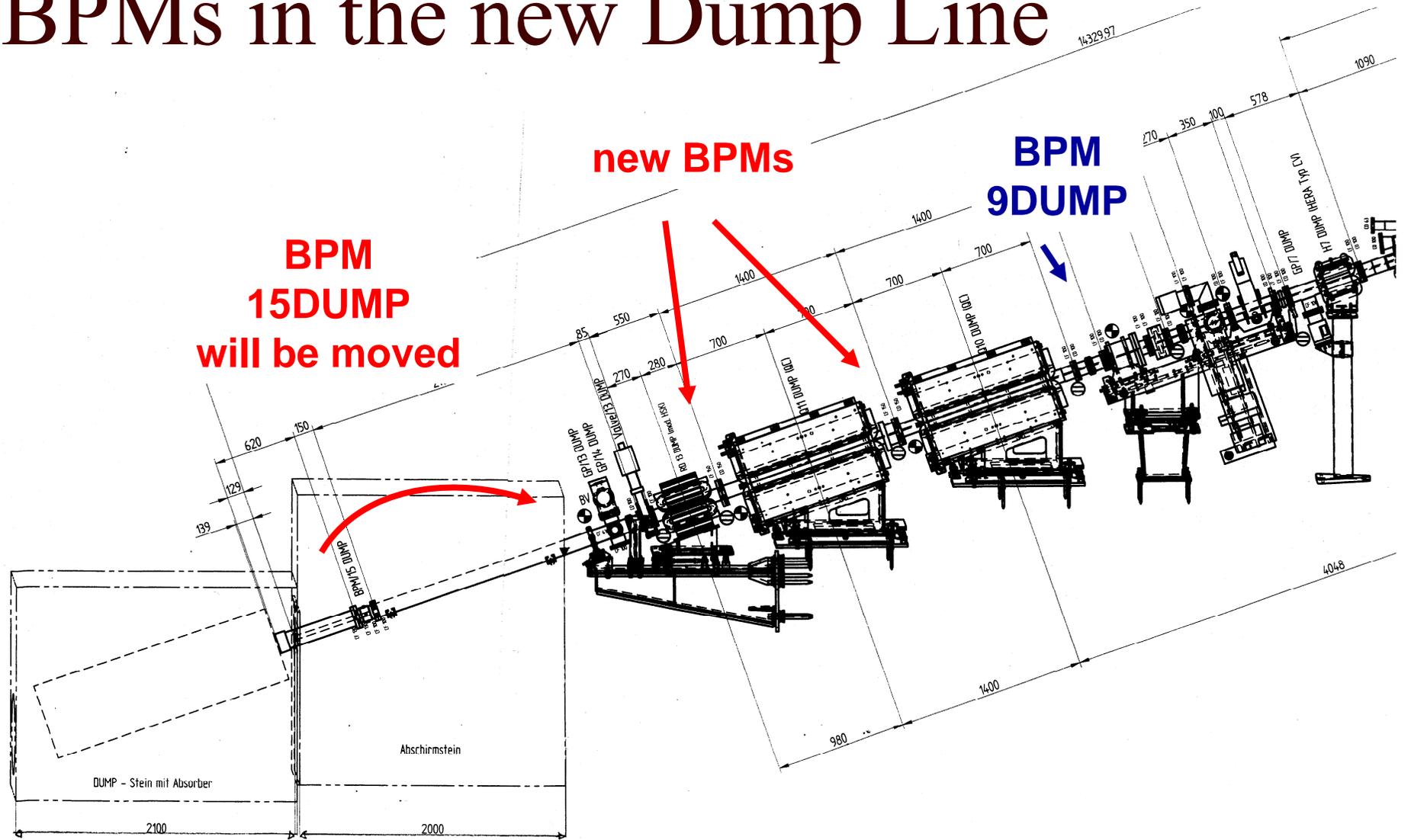


BPMs in the new Dump Line



Old BPMs in the new Dump Line

□ 15DUMP

- button
- attenuators damaged by radiation
- new vacuum part will be built in, upstream
 - no attenuators

□ 9DUMP

- Zeuthen Stripline
- no change planned

2 new BPMs in the new DUMP Line

□ 2 new BPMs

- Button; HERA type, button Ø17mm, welding
- at the end of each quad
- MVS has no spare chamber of Quadrupol type
- prefer design of BPM as a separate part (round chamber)
- **built-in not before September**; maybe faster if round chamber in Quad possible => MVS?

□ Electronics

- FLASH-type
 - limited reserve
- alternatively
 - TTF1-type (manual adjust.)
 - HERA-E type

□ Cables

- ■ new cables from tunnel to bld. 49

□ VXI Crate

- new crate needed
- new Slot-0 board
- bld. 49, S 2 , space is available

□ ADC

- 4 channels free in ADC105 (DIAG 8)
 - according DOOCS-Crates

□ Delay Unit

- *channel free?*



Electronics of ionization chambers for dump-line protection

1. Some features

- Measurement of currents: 1nA -100μA
- Reaction time is per train
- Logarithmic scale, LOG101 from Texas Instr.
- Alarm signals for MPS, predefined thresholds
- ADC signals for DooCs monitoring(or scope)
- 4 channels in VME mechanics

2. LOG101 log ratio amplifier

FEATURES

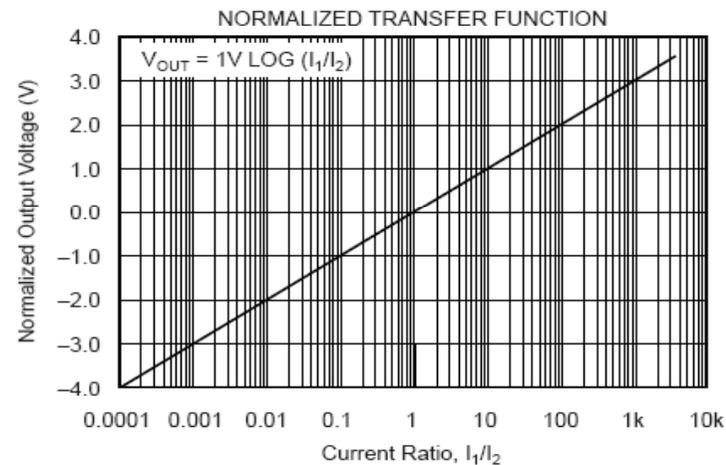
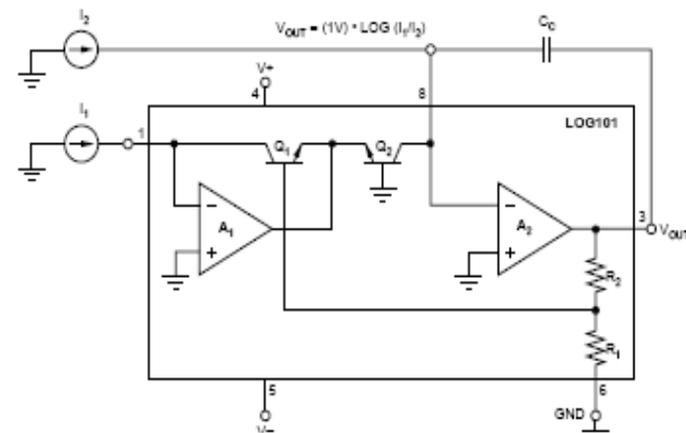
- EASY-TO-USE COMPLETE CORE FUNCTION
- HIGH ACCURACY: 0.01% FSO Over 5 Decades
- WIDE INPUT DYNAMIC RANGE:
7.5 Decades, 100pA to 3.5mA
- LOW QUIESCENT CURRENT: 1mA
- WIDE SUPPLY RANGE: $\pm 4.5V$ to $\pm 18V$

APPLICATIONS

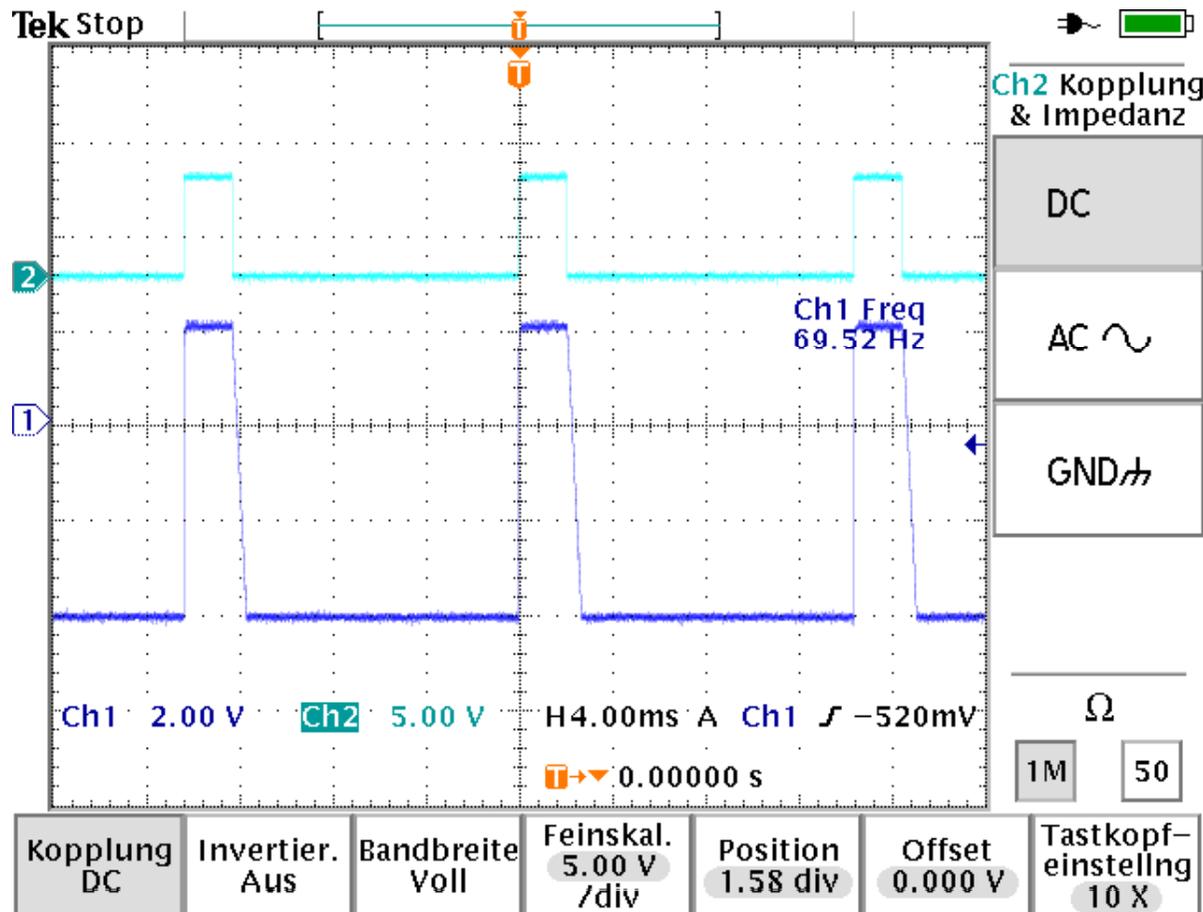
- LOG, LOG RATIO COMPUTATION:
Communication, Analytical, Medical, Industrial,
Test, and General Instrumentation
- PHOTODIODE SIGNAL COMPRESSION AMPS
- ANALOG SIGNAL COMPRESSION IN FRONT
OF ANALOG-TO-DIGITAL (A/D) CONVERTERS

One IC tested for currents from
2.5nA to 1.0mA, $I_{ref} = 1.0\mu A$

$$V_{out} = (1V) \cdot \text{LOG}(I_1/I_2)$$



3. Pulse measurements

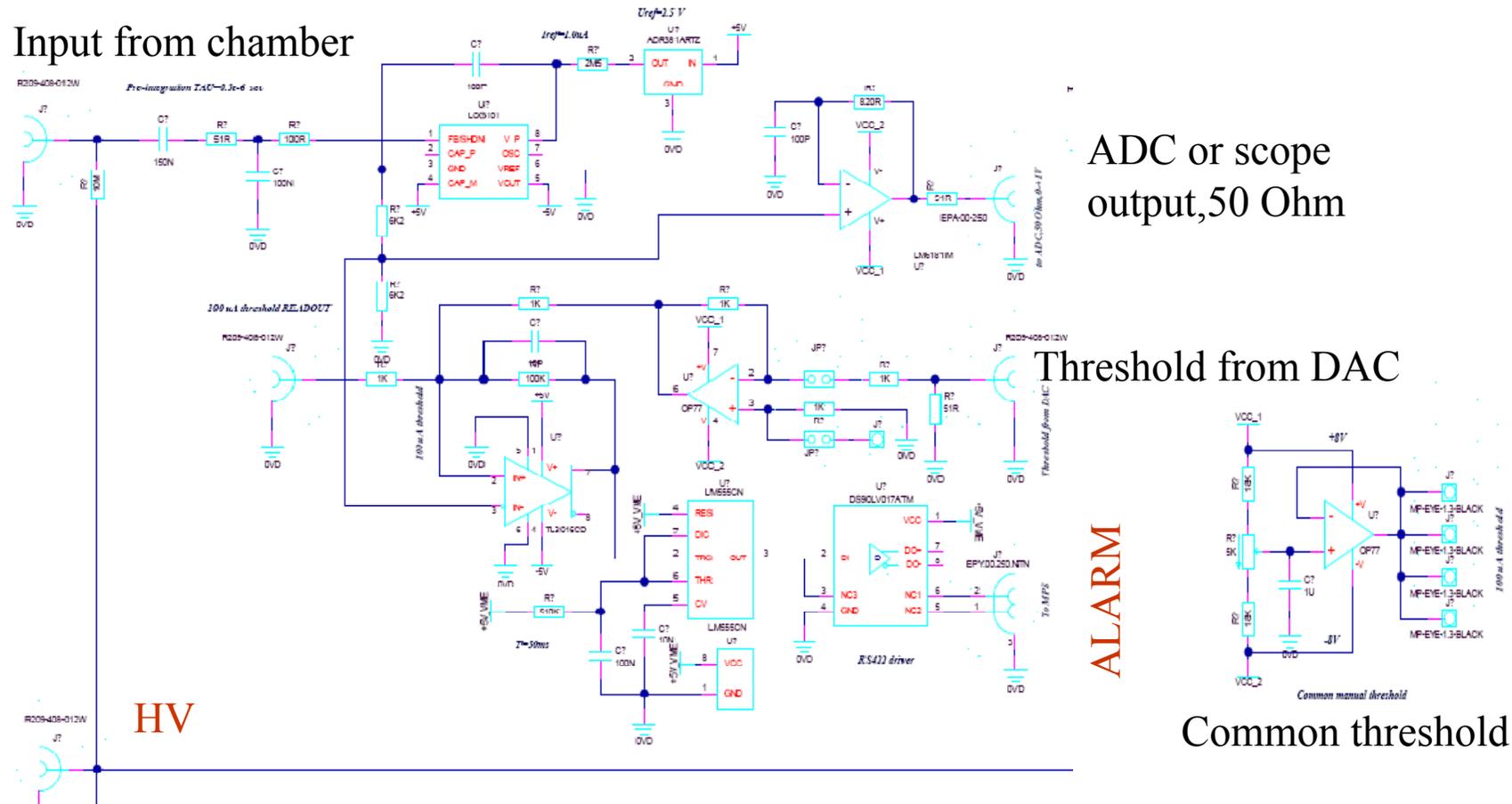


Input current=100 μ A

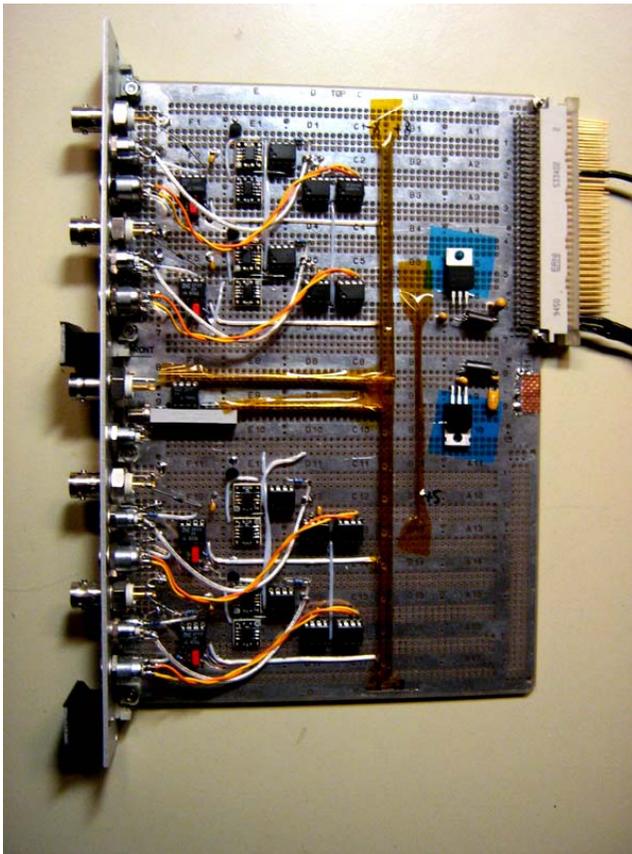
Ref. current=1 μ A

Output voltage=+2.0V

4. Schematics of one channel



5. Prototyping of 4 channels



- Board is finished and tested
- Power :+12V 105mA
 - 12V 65mA
 - + 5V 70mA
- Analog output +/- 1V
- Alarm output RS422
- Manual or DAC threshold
- Monitor of threshold



Water filled Cherenkov pipes

- Experimental studies have started by Davyd Karsten, _____
Christianeum, HH-Othmarschen
Results in 2 weeks. => MDI
-

Cherenkov light fibers

- 4 empty tubes will be installed next to Ionization chamber (cable). => MDI/MVS
- Light fibers can be put in easily and exchanged at any time. => M. Körfer/MDI
- Connected to System of M. Körfer et al. => M. Körfer