

Zermanice Dam Czech Republic

Geopendulum system

Ludek Novosad, G4C, Czech Republic

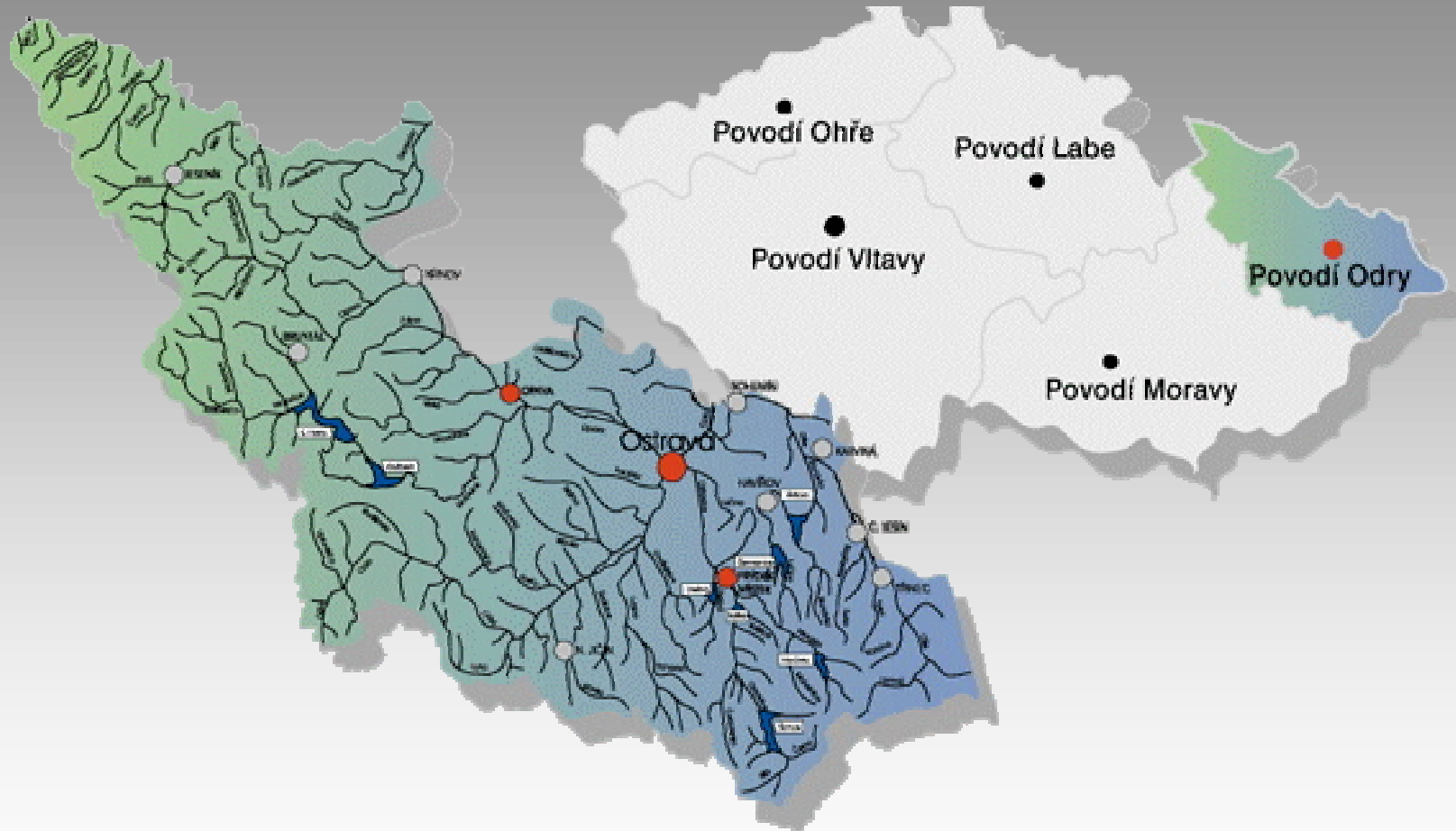
G4C

GEOKON
The World Leader in Vibrating Wire Technology

Map of Europe



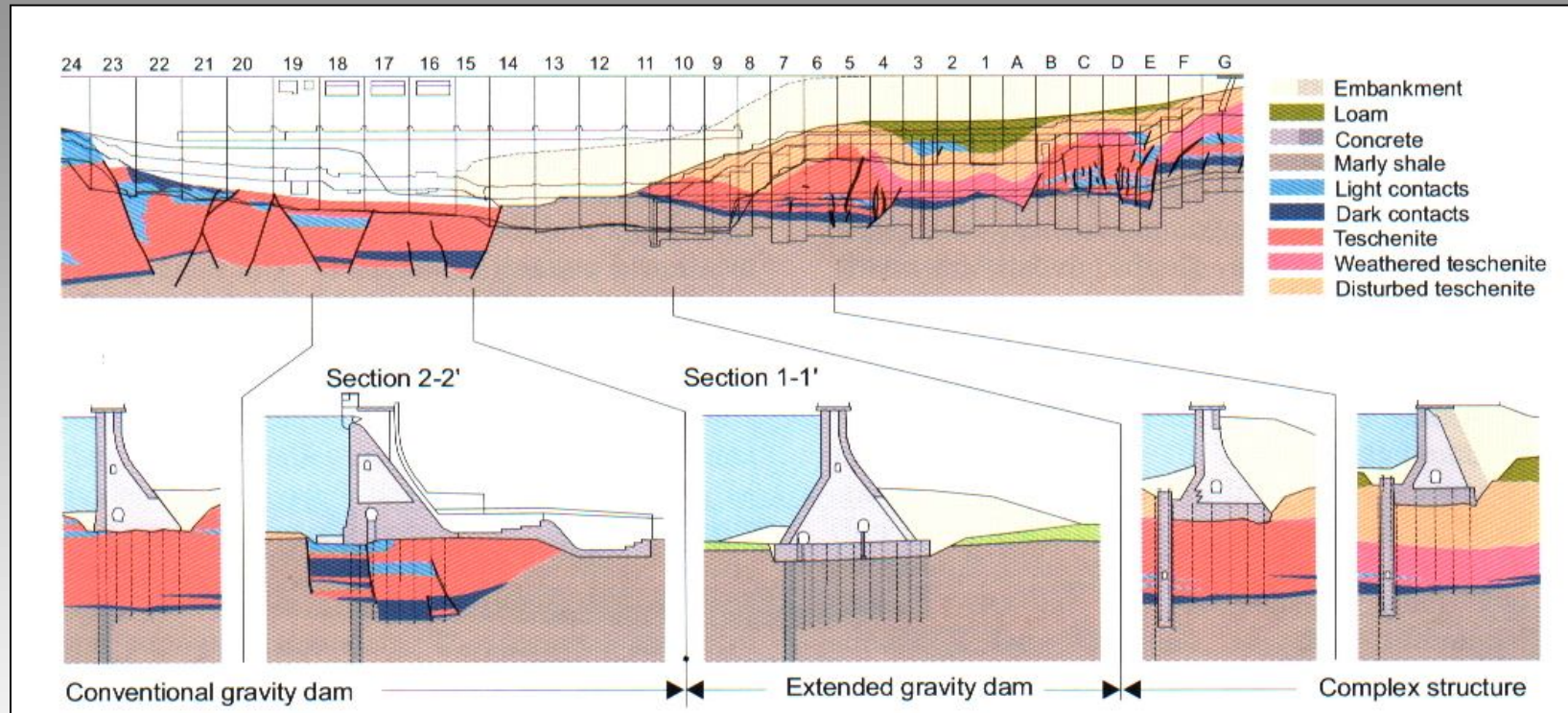
The Odra River Watershed



Zermanice Dam



Dam Profile and Cross Section

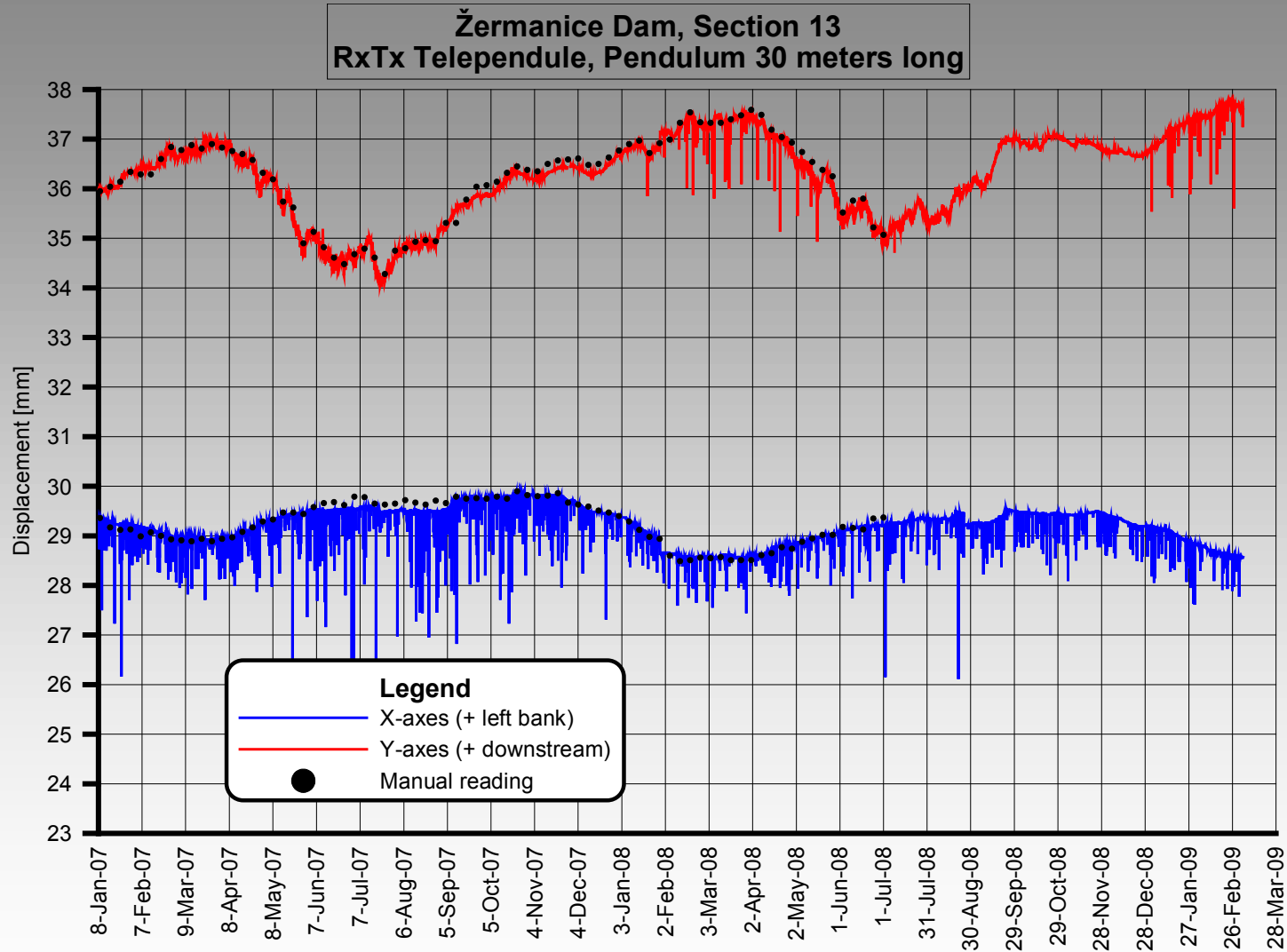


First Pendulum Installation

- Section 13
- RxTx Telependule
- RS 485 Interface
- CR10X datalogger
- Connected to already installed Geokon VW piezometers measurement system



Section 13 - RxTx Data



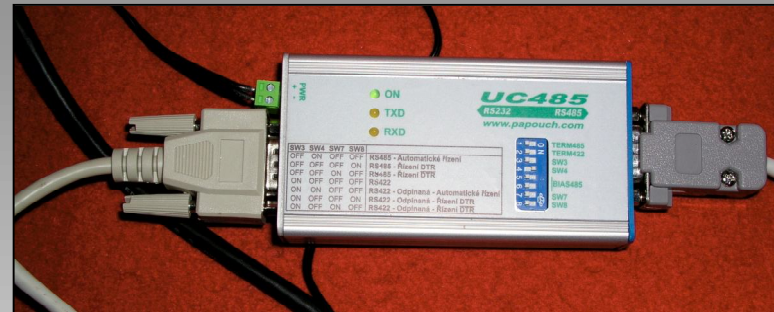
Reasons for Installing Geopendulum BGK-6850

- Erratic data from RxTx
- Complicated connectivity of RxTx through RS485 to CR10X - special cable needed
- After several years of solving RxTx problem I was informed by manufacturer that RxTx is suitable for wires till 1mm diameter (we have 1.7mm)
- Geopendulum was the new device with good references from China

Geopendulum Testing

- Testing in Geokon
- Testing in my office
- Looking for suitable RS485/RS232 interface
- Setting right parameters for the measurement
- Connection to CR10X as 4-20mA device
- Connection to CR10X as RS485 device
- Writing the programs

RS485/RS232 Interface



Testing in my office



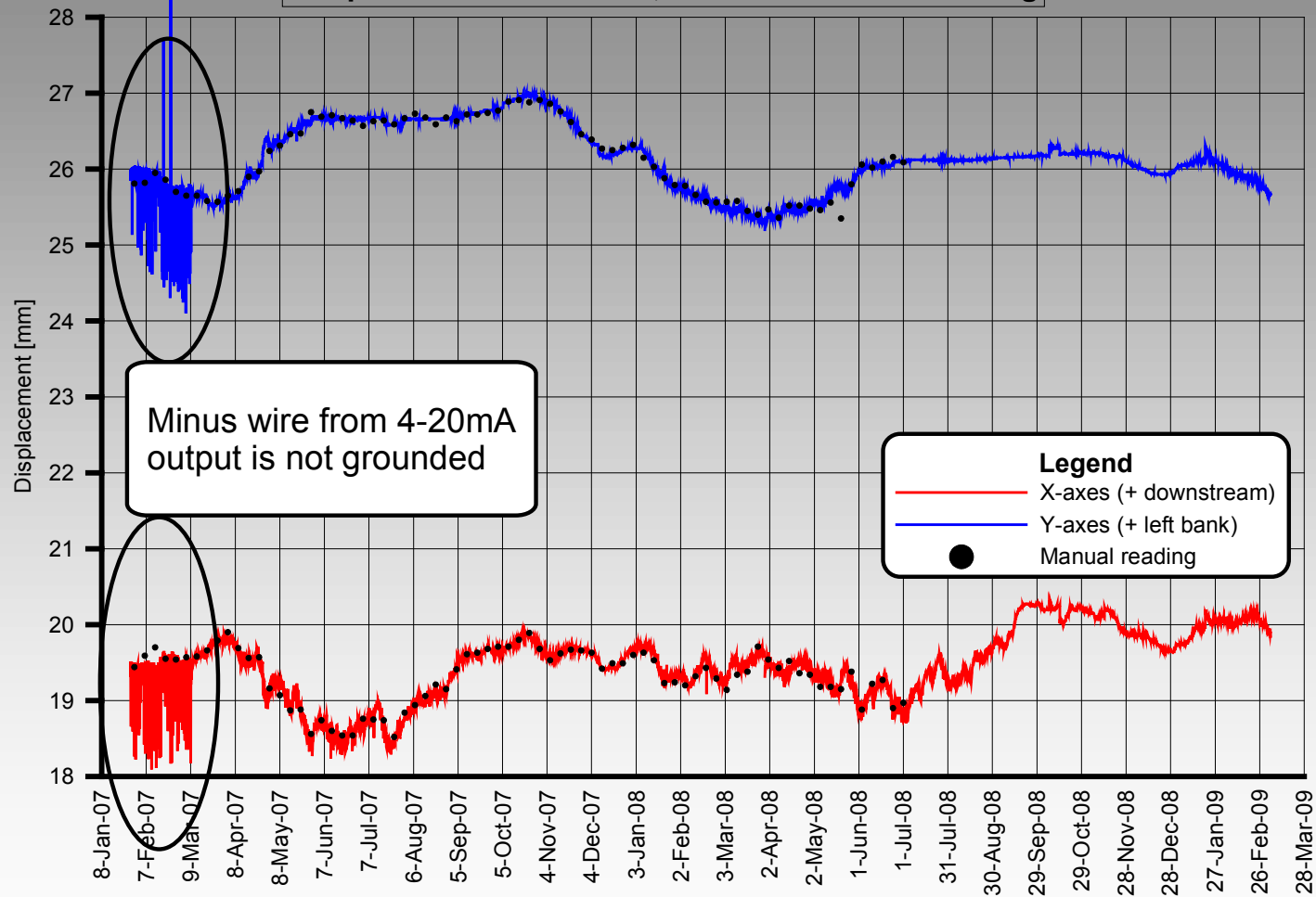
Damsite Installation



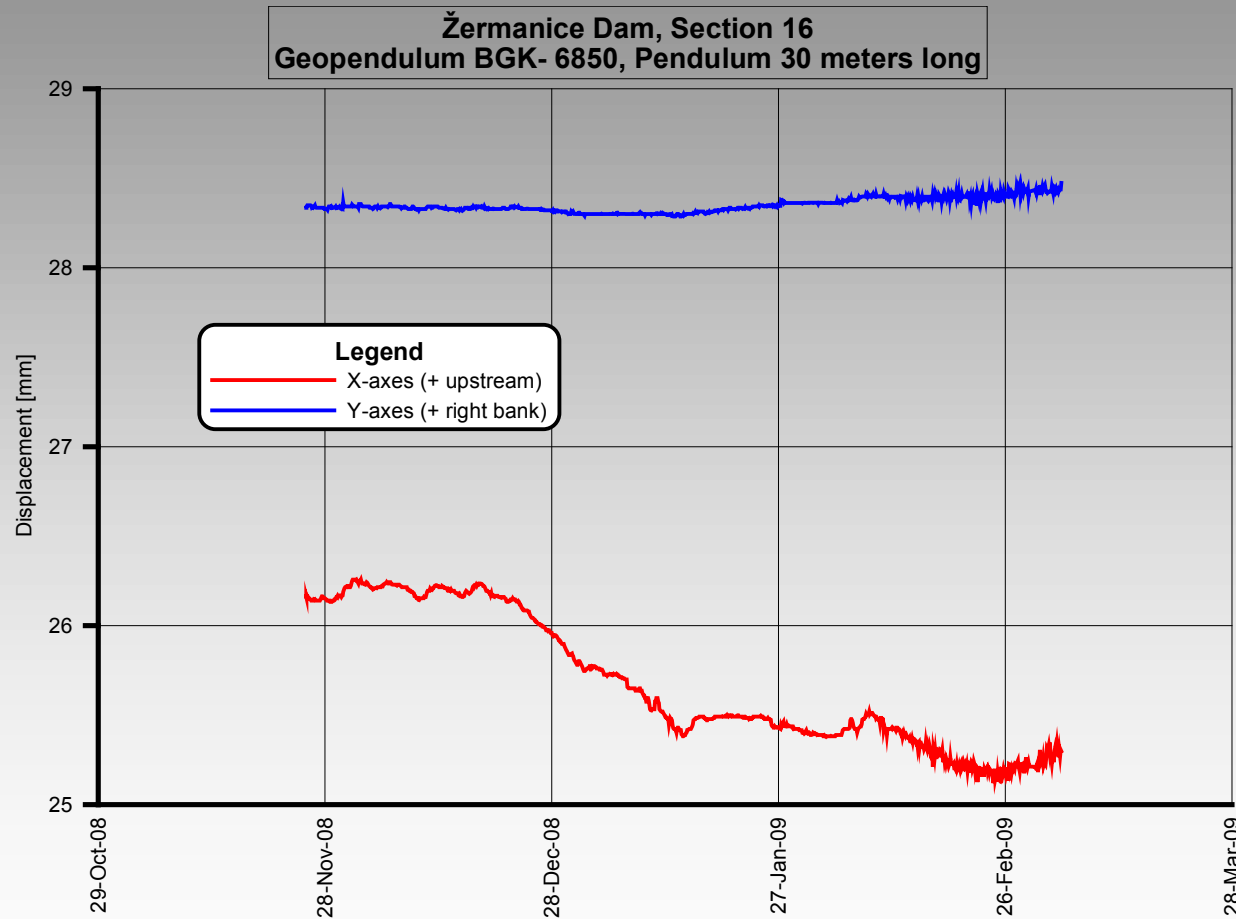
Installation at Section 11

4-20mA Measurement

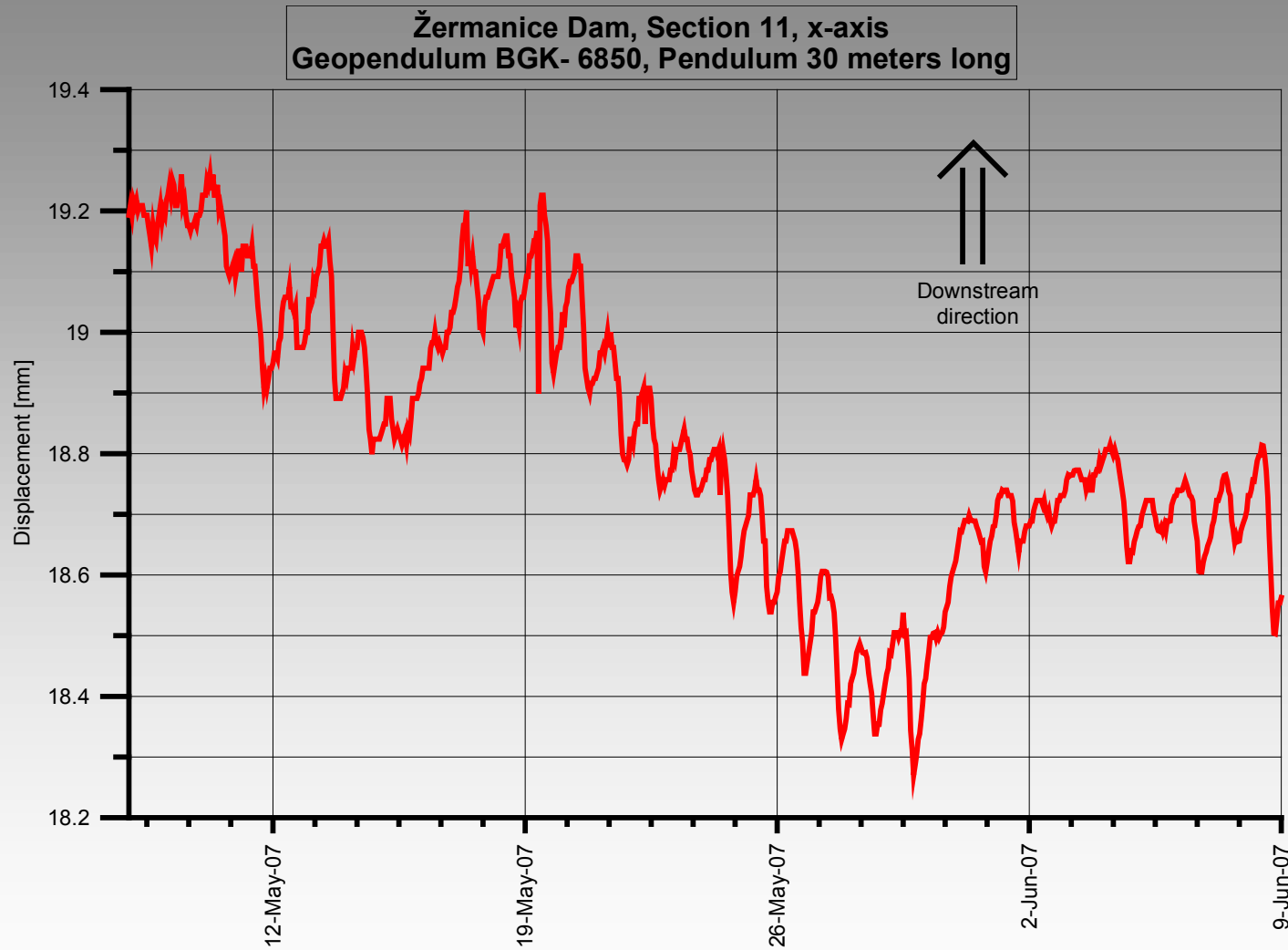
Žermanice Dam, Section 11
Geopendulum BGK- 6850, Pendulum 30 meters long



Second Unit RS485 Measurement in Section 16



Dam Temperature Deformation



Conclusion

- Simple setting of the unit after you solve RS485 connectivity
- Absolutely stable reading with connection both 4-20mA and RS485 interface to CR10X datalogger
- Through RS485 connection you can read the same values as displayed on the device
- The best solution with new Campbell's CR800 and CR1000 dataloggers - SDM-SIO4 is not required when using RS485 output
- Excellent device