

# Communication system on BEO Moussala

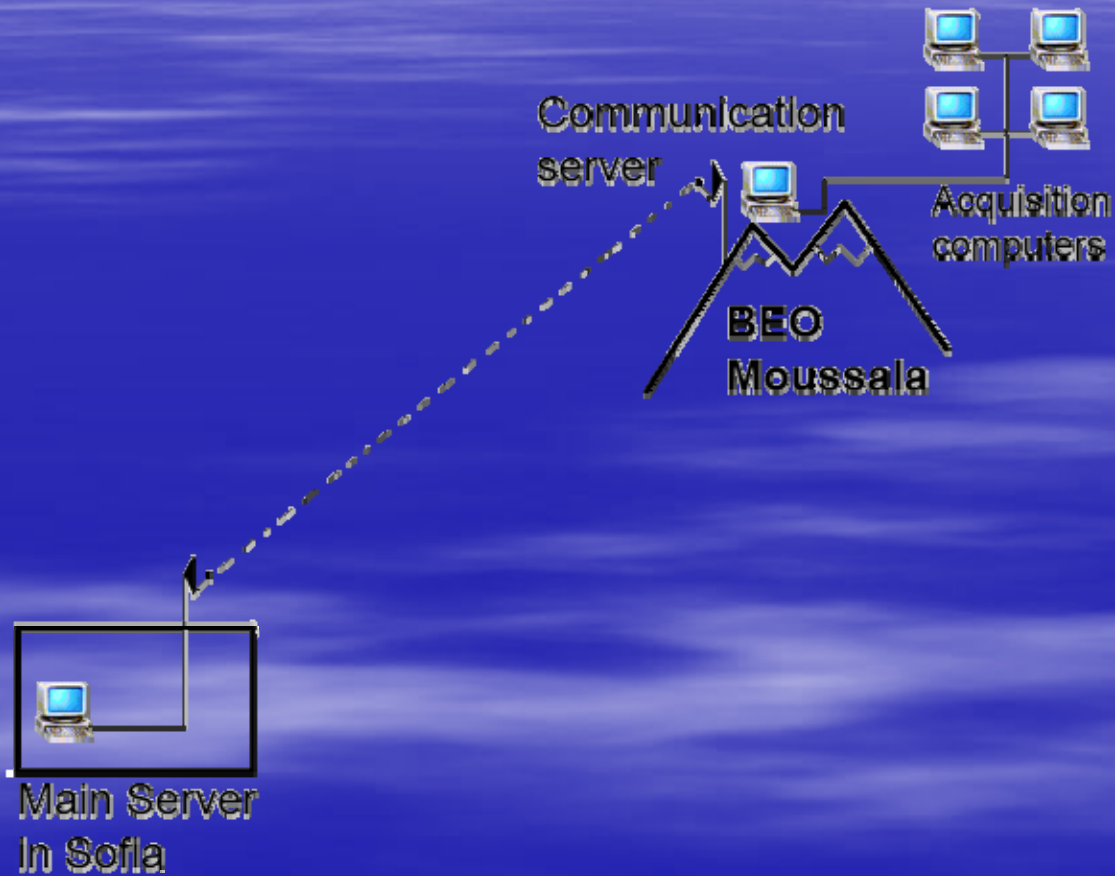
**Basic Environmental  
Observatory**

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# Peak Moussala

- Situated in Rila mountain
- Height 2925m a.s.l.
- BEO functioning since 2000
- Communication system functioning since 2002
- Strait line distance to Sofia main server ~60 km
- Uptime 24 hours

# Communication schema



# Locations overview

Radio  
modem and  
VSAT in  
Bulgarian  
Academy of  
Science in  
Sofia



# Locations overview

Radio  
modem  
and VSAT  
at peak  
Moussala



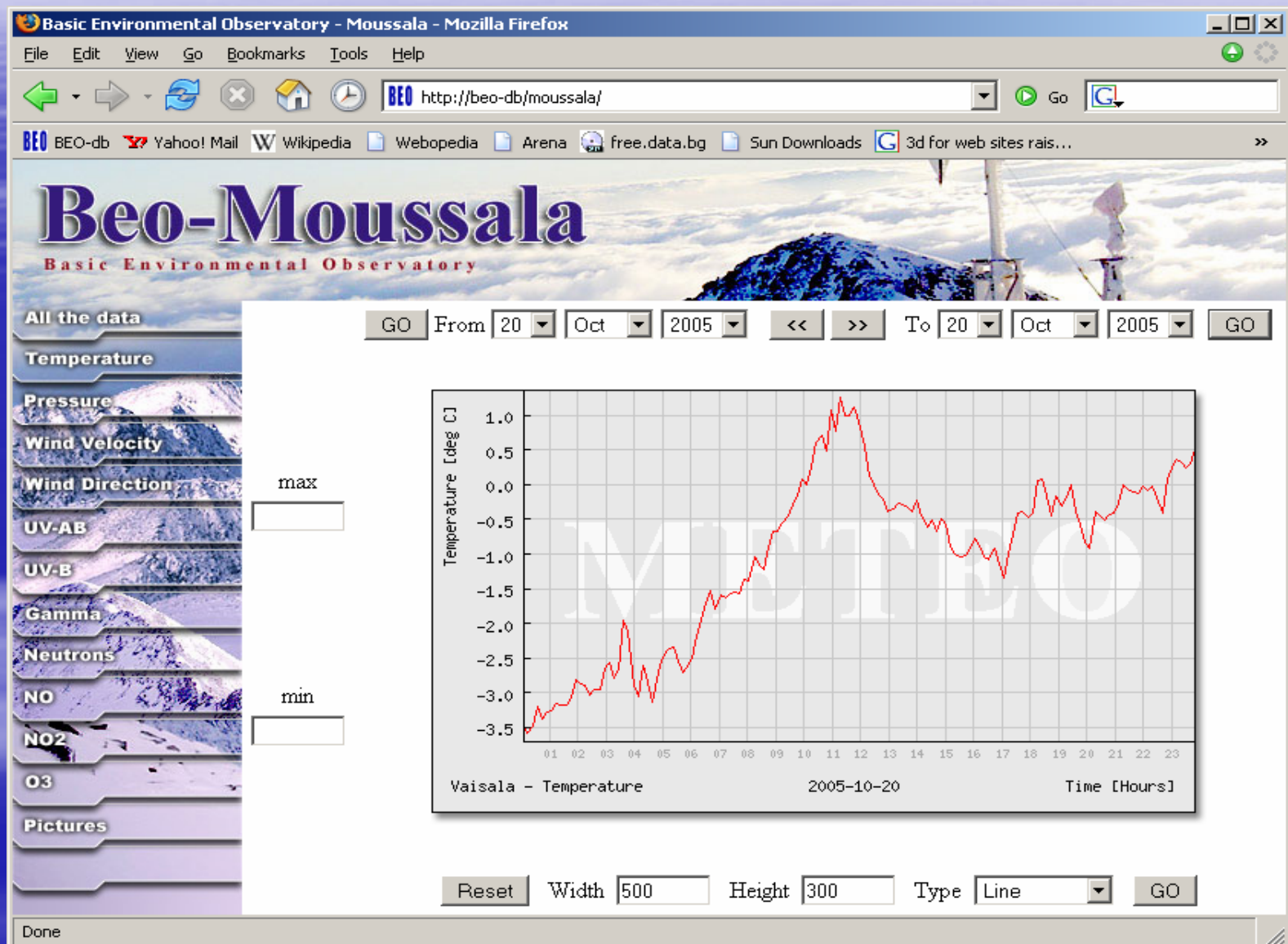
# Technical Specifications

- Model WiLan-VIP 110-24
- Frequency – 2.4000 to 2.4835 GHz  
(Industrial, Scientific and Medical band )
- Type – Spread Spectrum Radio
- Bandwidth - 11 Mbps full duplex
- Antenna type - VSAT
- Polarization -vertical

# Measured values visualized on the website <http://beo-db.inrne.bas.bg>

- Temperature
- Humidity
- Pressure
- Wind velocity
- Wind direction
- UV-AB
- UV-B
- Neutrons
- Gamma dose rate
- O<sub>3</sub>
- NO
- NO<sub>2</sub>

# Website beo-db.inrne.bas.bg



# Video from BEO Moussala



- Cameras point at North, East, South, West
- Uptime 24 hours
- Password protected access
- 64 Kbps bandwidth required
- Special client program required for viewing
- Video history is available for 1 month
- Video history available online

# Future plans

- Setting up SAP server
- Making data compliant with DAQAS server
- Using DAQAS client program for data quality management
- Sharing real time data on WAP for viewing with GSM phones
- Sharing real time video on WAP for viewing with GSM phones

# SAP database (MaxDB)

- One of the most solid and reliable databases
- Easy configuration and low administration
- Elaborate backup and restore capabilities
- Continuous operation, no scheduled downtimes required
- Designed for large number of users and high workloads
- Scales to database sizes in the terabytes
- Synchronization Manager to control enterprise-wide data replication
- Easy-to-use graphical database tools
- Available for all enterprise HW/OS platforms
- Compatible with DAQAS server

# Real time WAP data from BEO



# Real time WAP video from BEO



# Benefits of DAQAS server

- **Implements data quality**
- **Multi-user system**
- **No fees for DAQAS or MaxDB**
- **Open source project**

Thank you for your  
attention

