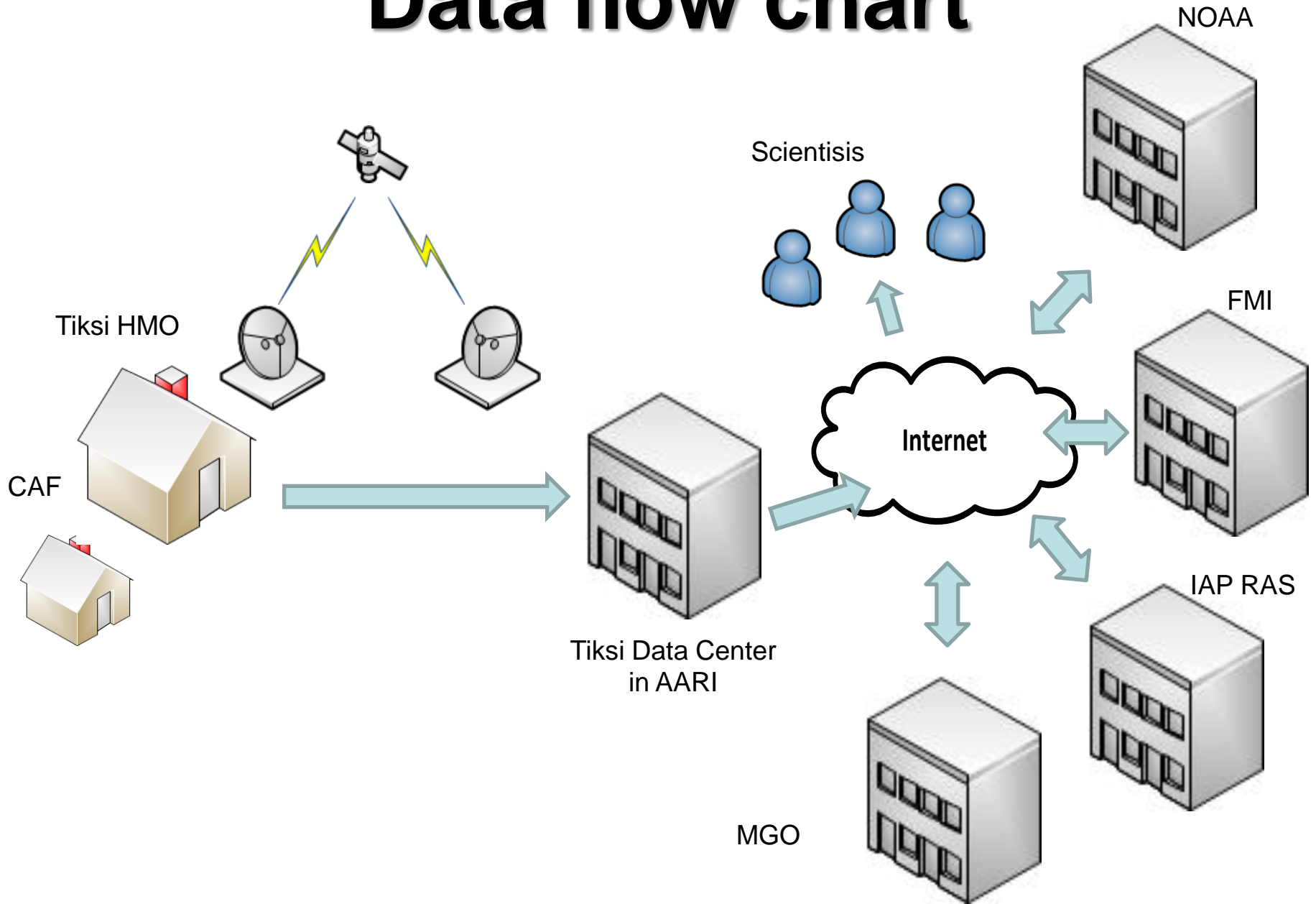


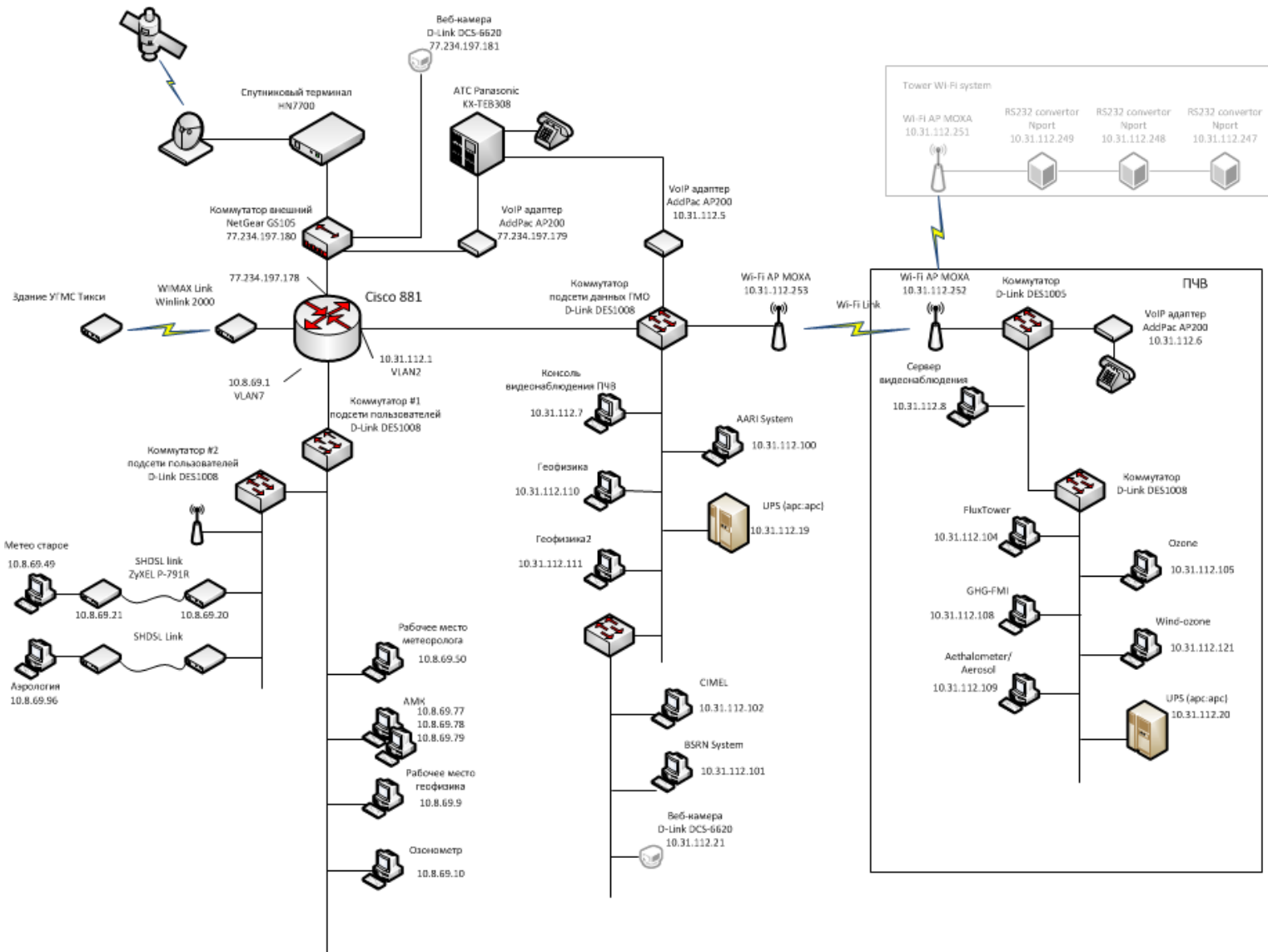
# The data collection and transmission system at the Tiksi HMO

D.Apartsev, T.Afanasyeva

# Data flow chart



# Detailed scheme of HMO LAN



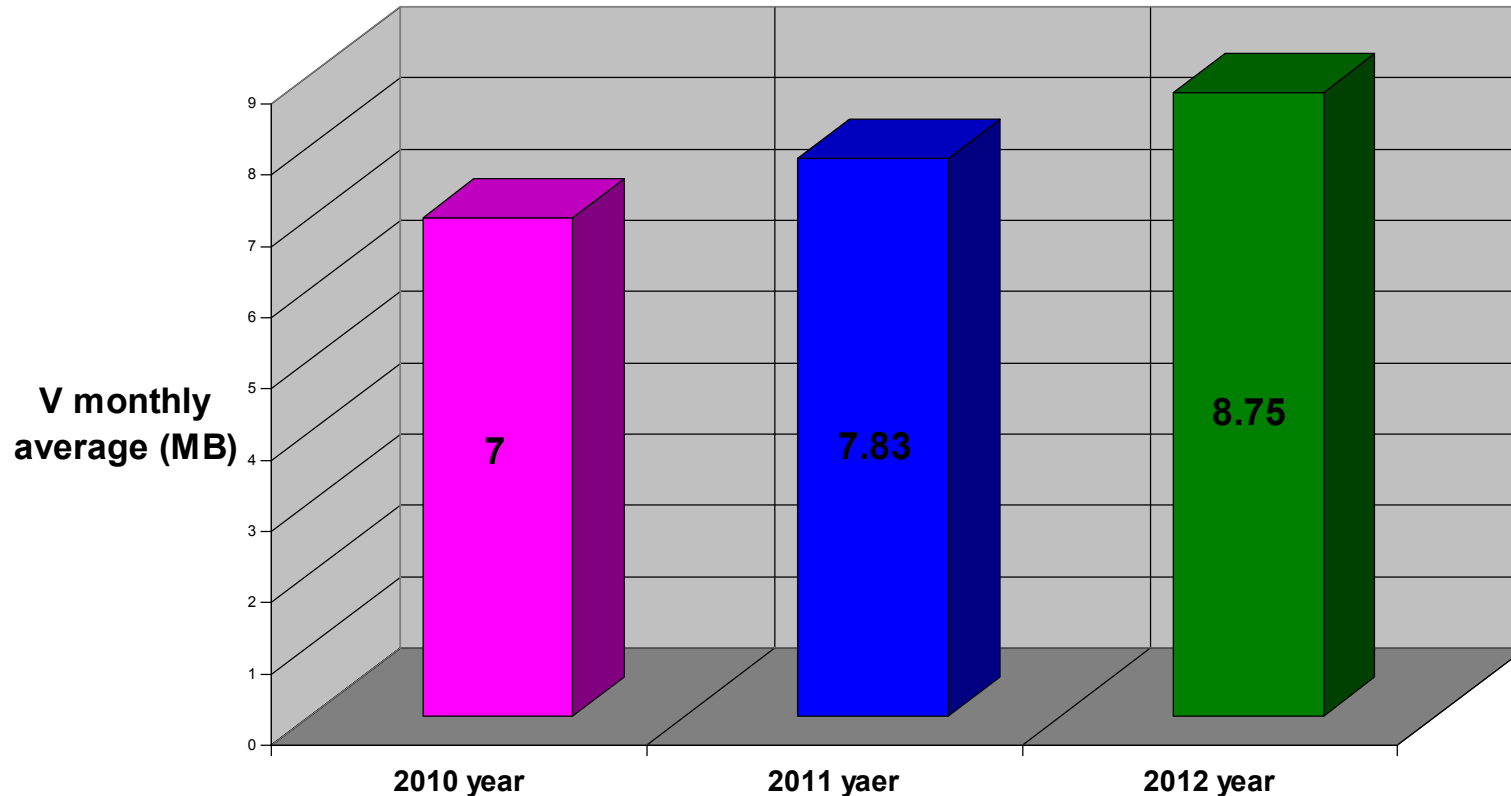
# Problems

- Low proficiency and low motivation of local staff
- Poor quality and unstable electricity
- Acquisition computers are the different old used laptops. There is no reserve for fast replacement
- Operation system on most acquisition computers is Windows XP. It complicates remote management and data transfer
- Local network in Meteo building is in bad condition

The report on the collected data for  
the last three years

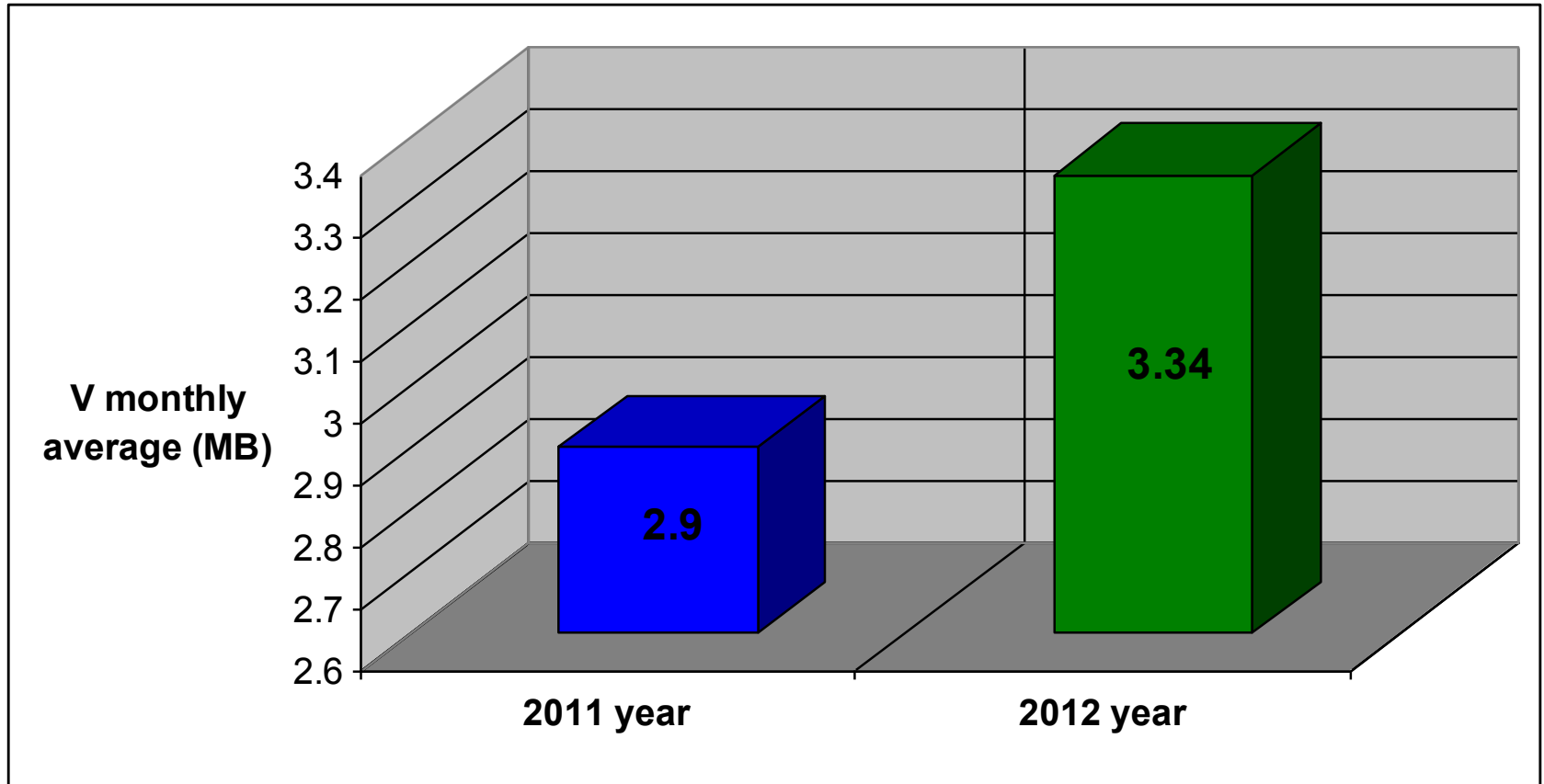
The data from the NOAA  
instruments

# Data on Baseline Surface Ratiation Network (BSRN)



- The data on BSRN have started coming from June 8, 2010.
- The data arrives on the AARI server every day. During the all observation period the problems were two times:
  - 1) from Dec 24, 2010 up to Jan 12, 2011. A storm dropped a power line pole.
  - 2) Aug 8 - Aug 18. There were electricity supply problems.

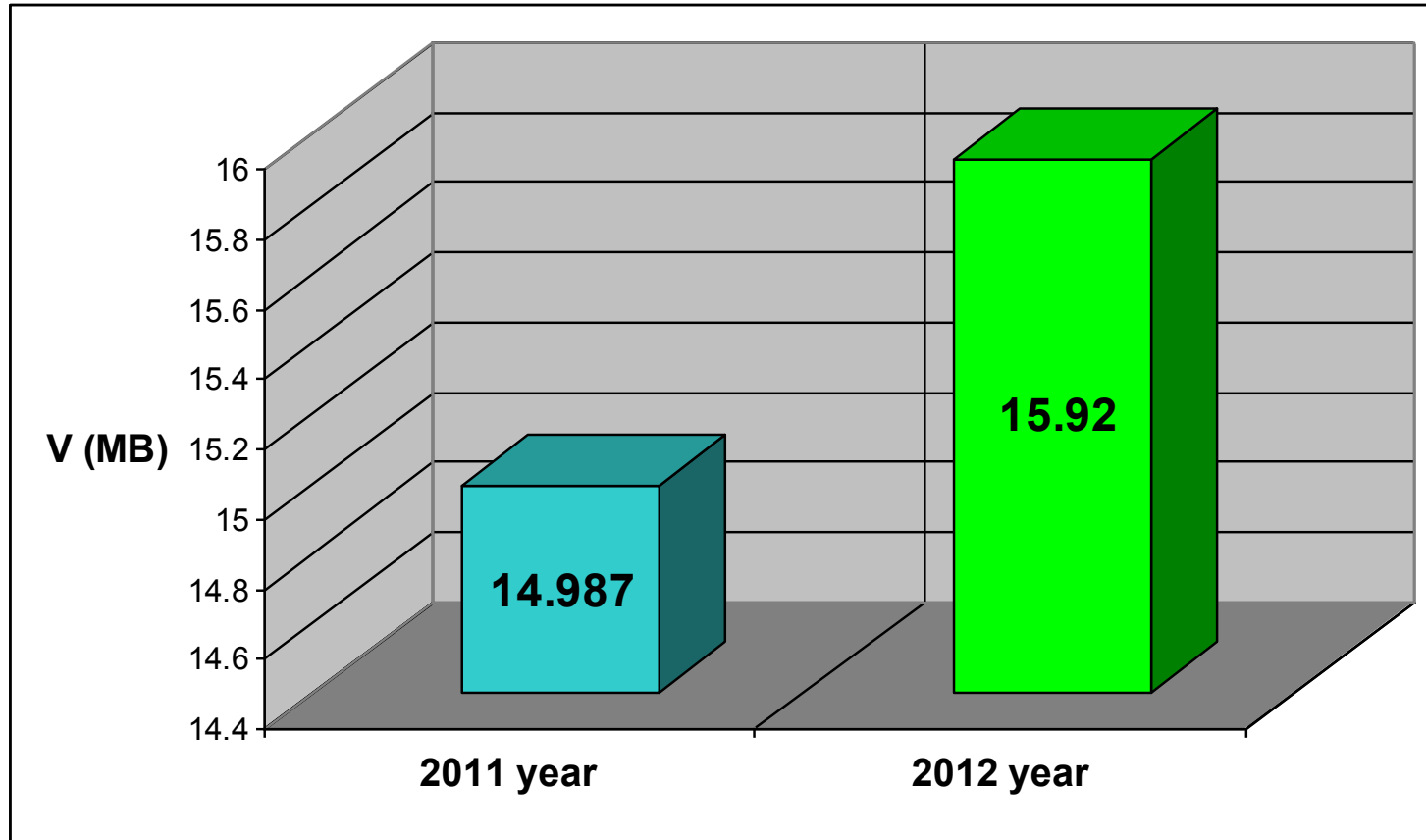
# The data on the reflected solar radiation



- The reflected solar radiation data have started coming from April 21, 2011.
- The data arrives on the AARI server every day. During the all observation period the problem was once:
- 1) from Jul 31 up to Aug 3. There were electricity supply problems.

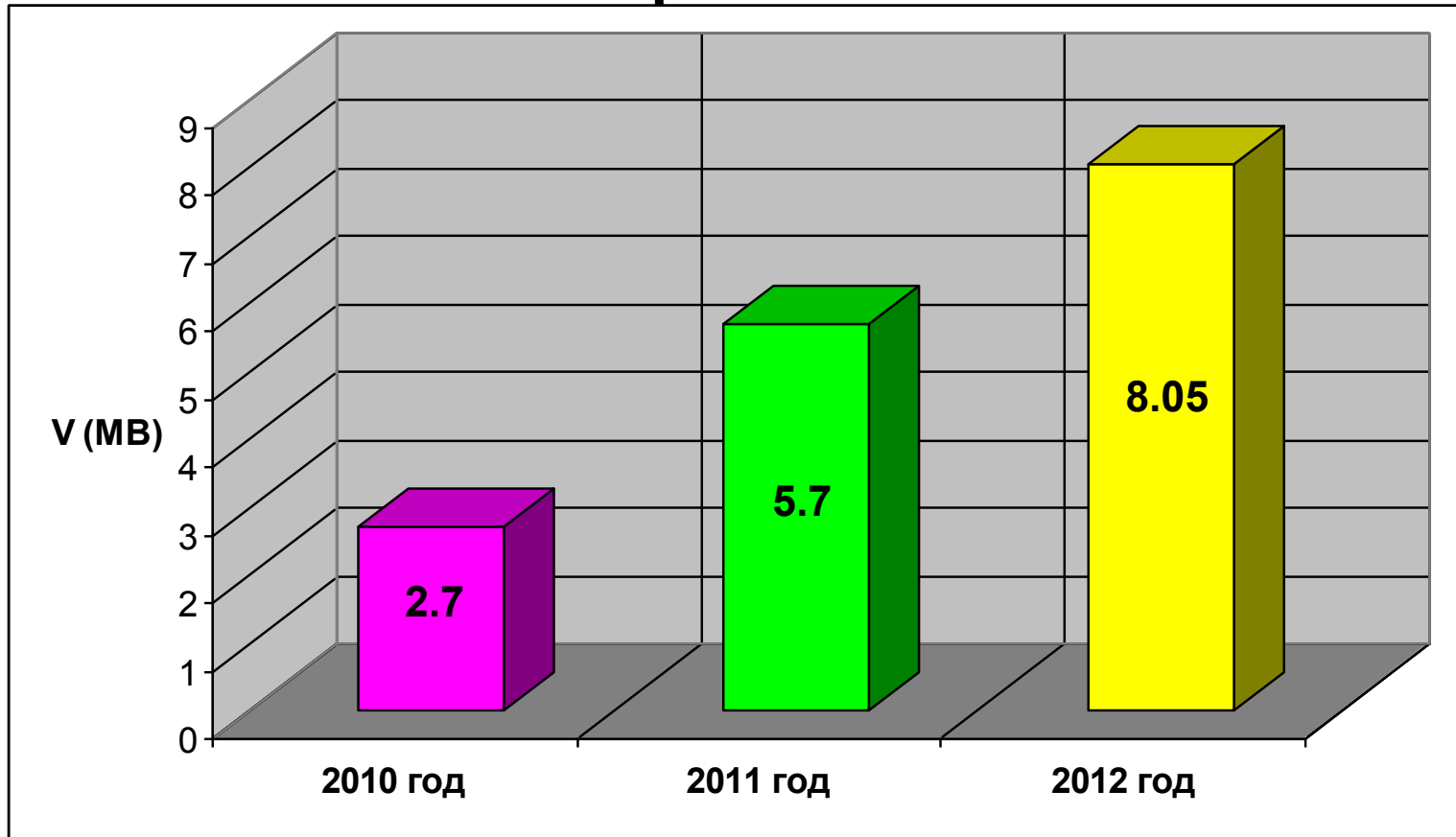


# The climate data (CRN)



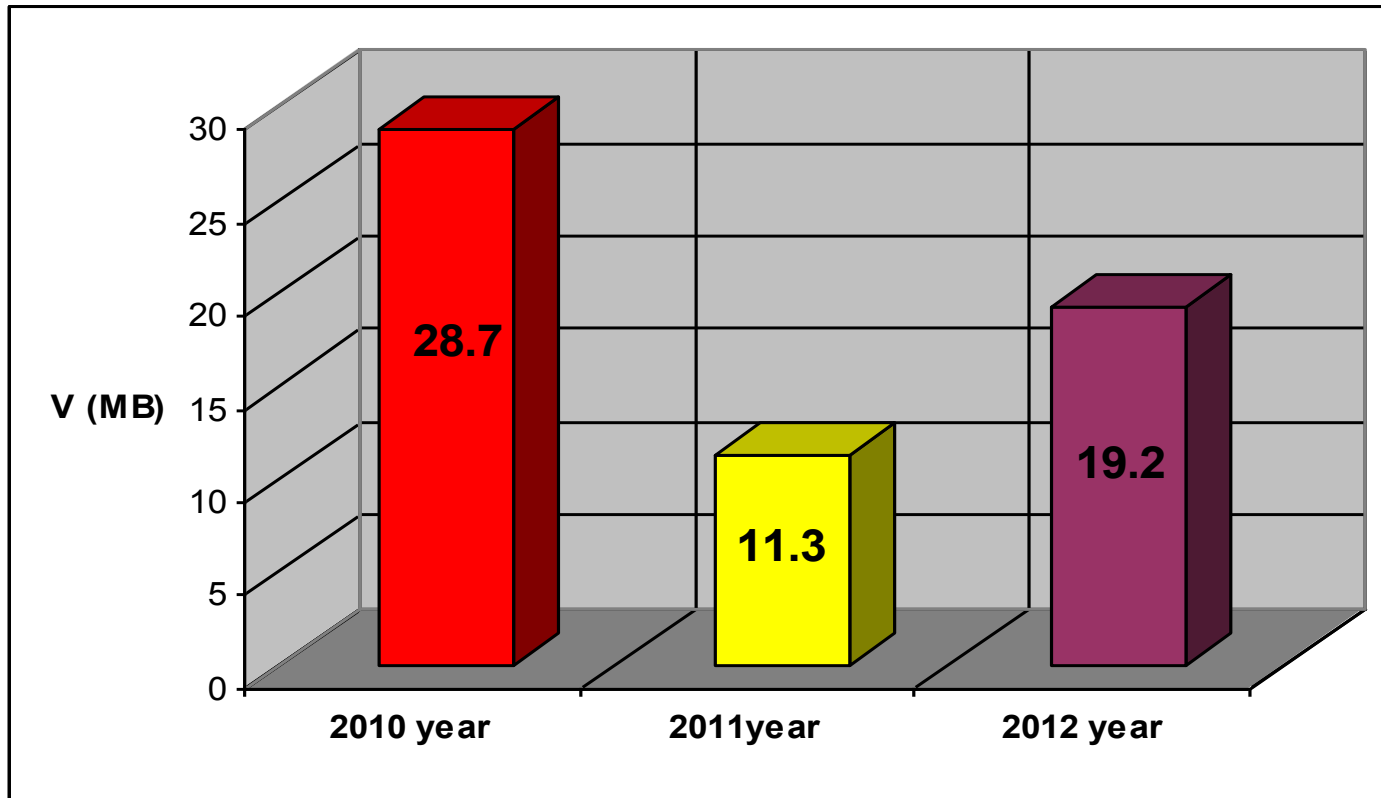
- The climate data have started coming from April 27, 2011.
- The data arrives on the AARI server every day. During the all observation period the problems were two times:
  - 1) from Feb 20 up to Mar 5, 2011: the fans did not work.
  - 2) from Jul 29 up to Aug16. There were electricity supply problems.

## The sun photometer data



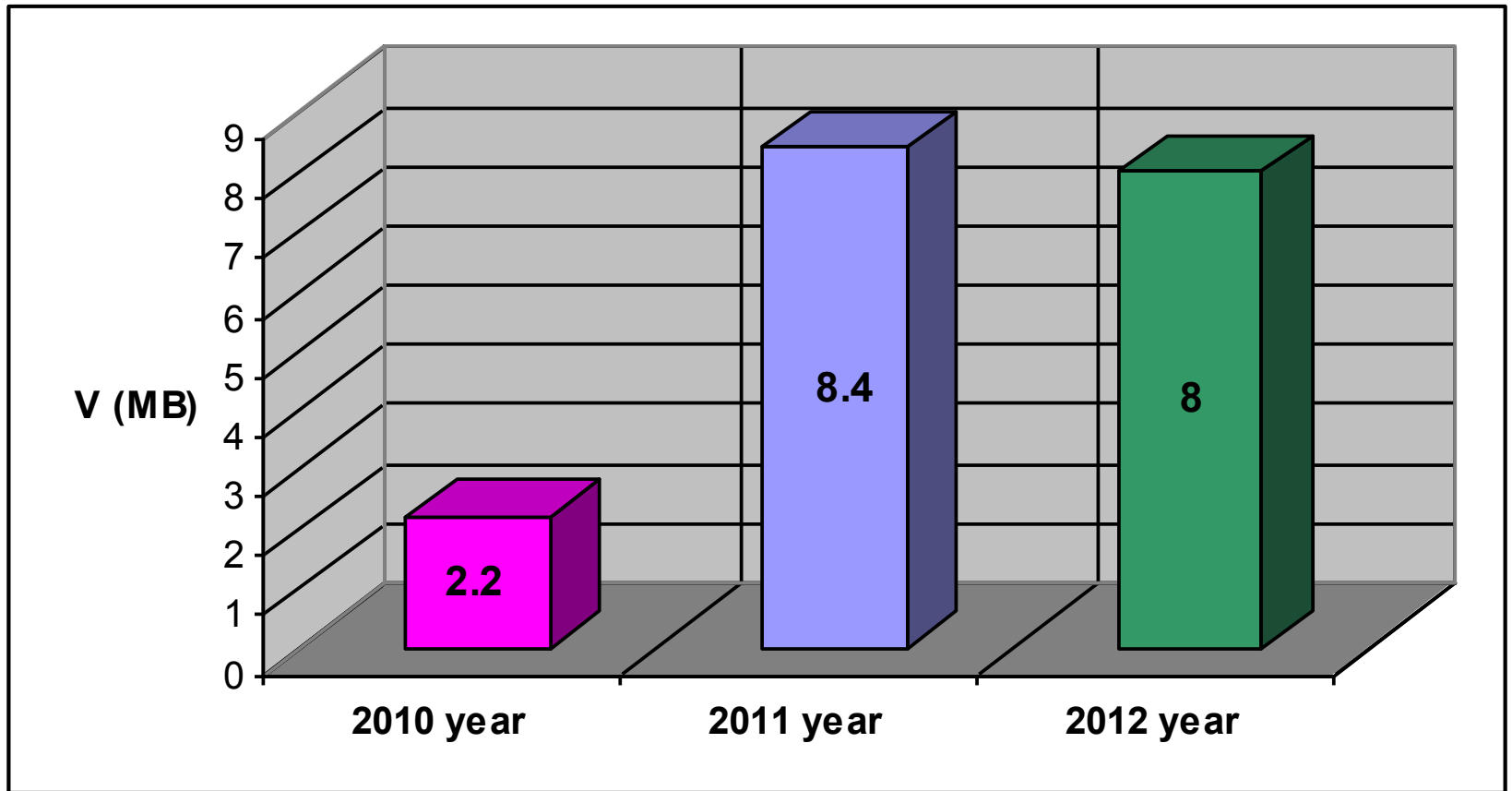
- The sun photometer data have started coming from June 10, 2010.
- The data arrives on the AARI server seasonally: from spring to autumn.
- in 2010: from Jun10 up to Nov 22
- in 2011: from May 26 up to Nov 23
- in 2012: the photometer has been working from May 24

# The data on Black Carbon



- The data on black carbon have started coming from September 29, 2009.
- The malfunctions were only twice:
  - 1) Dec 24, 2010 the problems with air inlet.
  - 2) Dec 27, 2011 the problems with air inlet.
- From Jan 28, 2012 the data have started to arrive automatically on the AARI server every day.

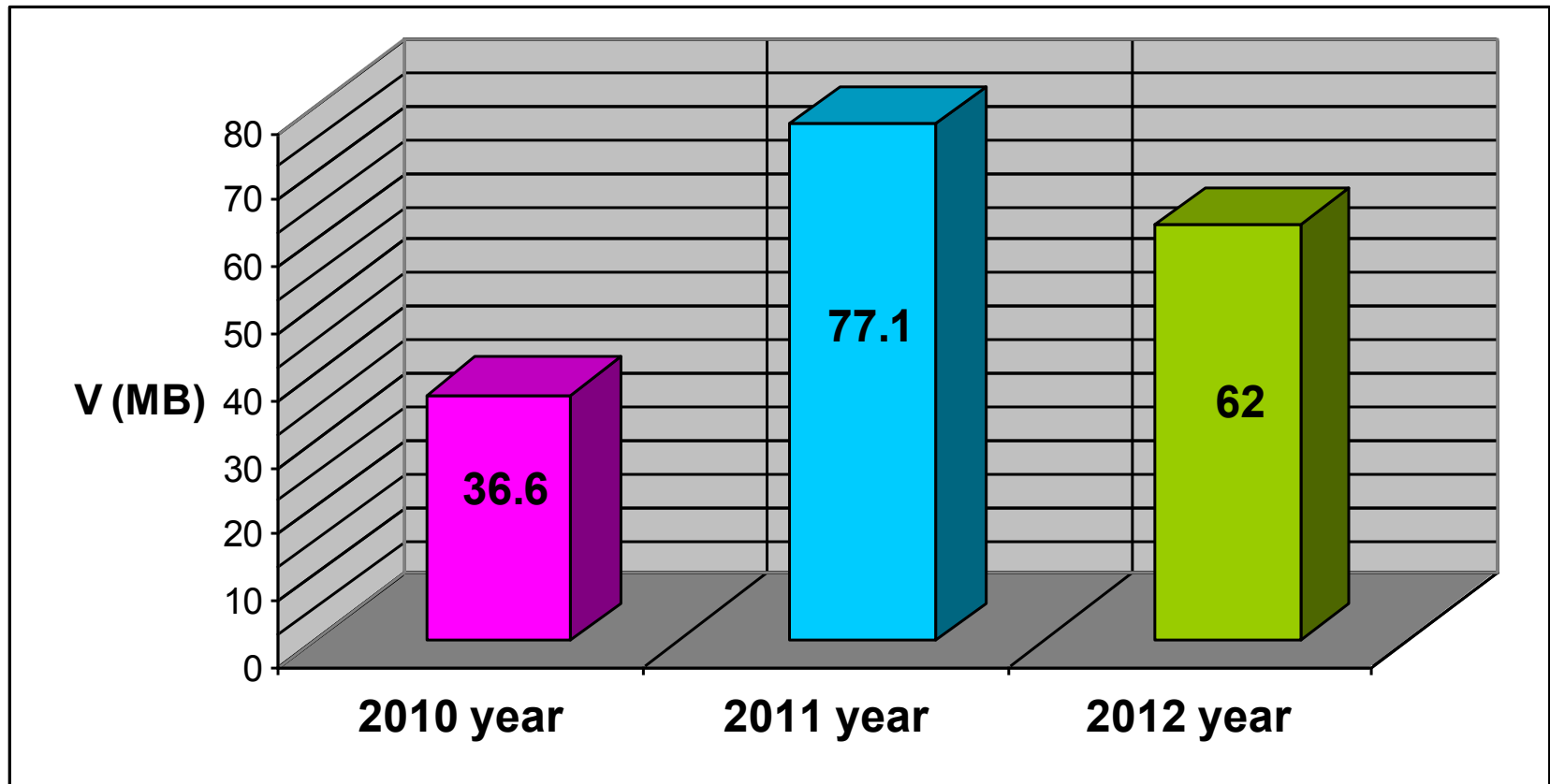
## Ozone data



- The data have started coming from Oct 20, 2010.
- The data are taken from the instrument by hand once every two weeks.

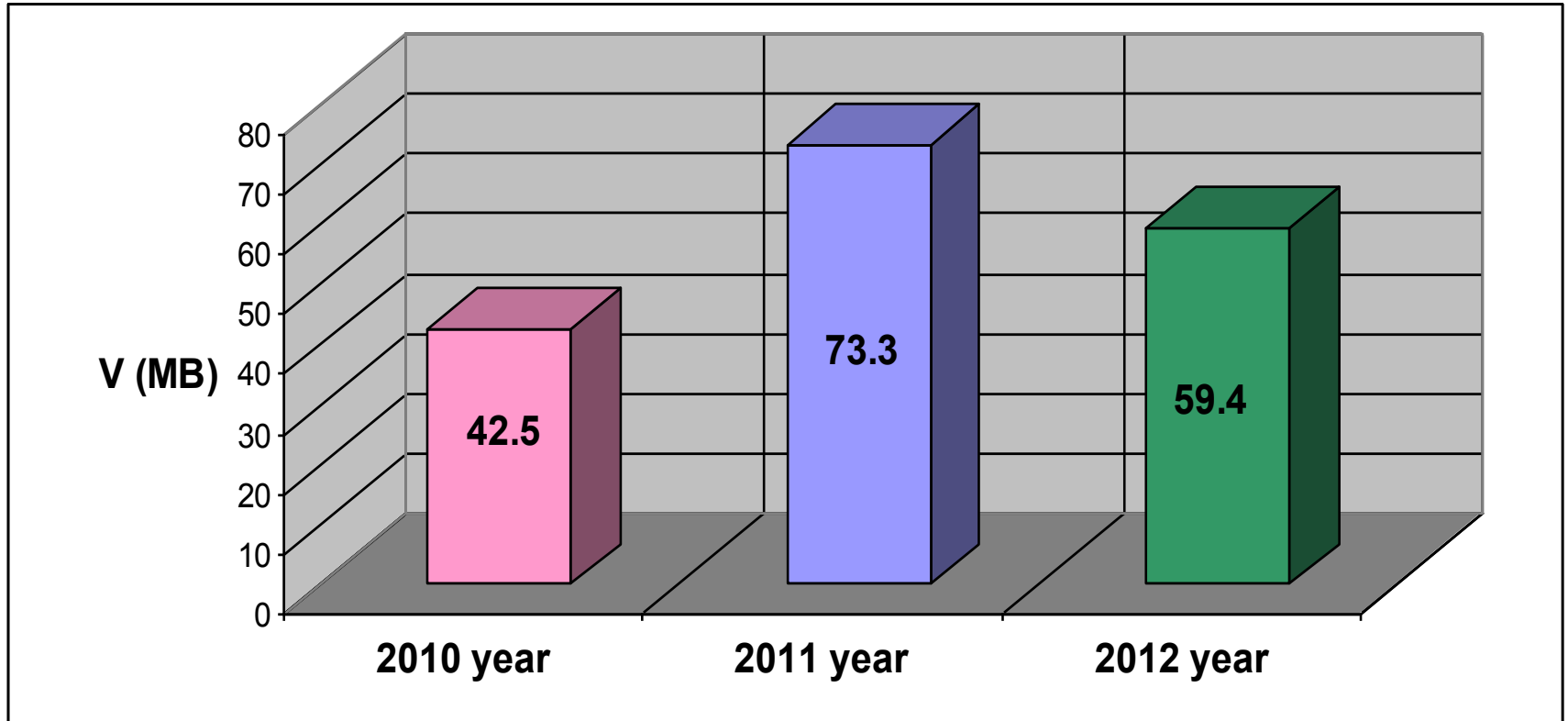
The data from the FMI  
instruments

# Aerosol data



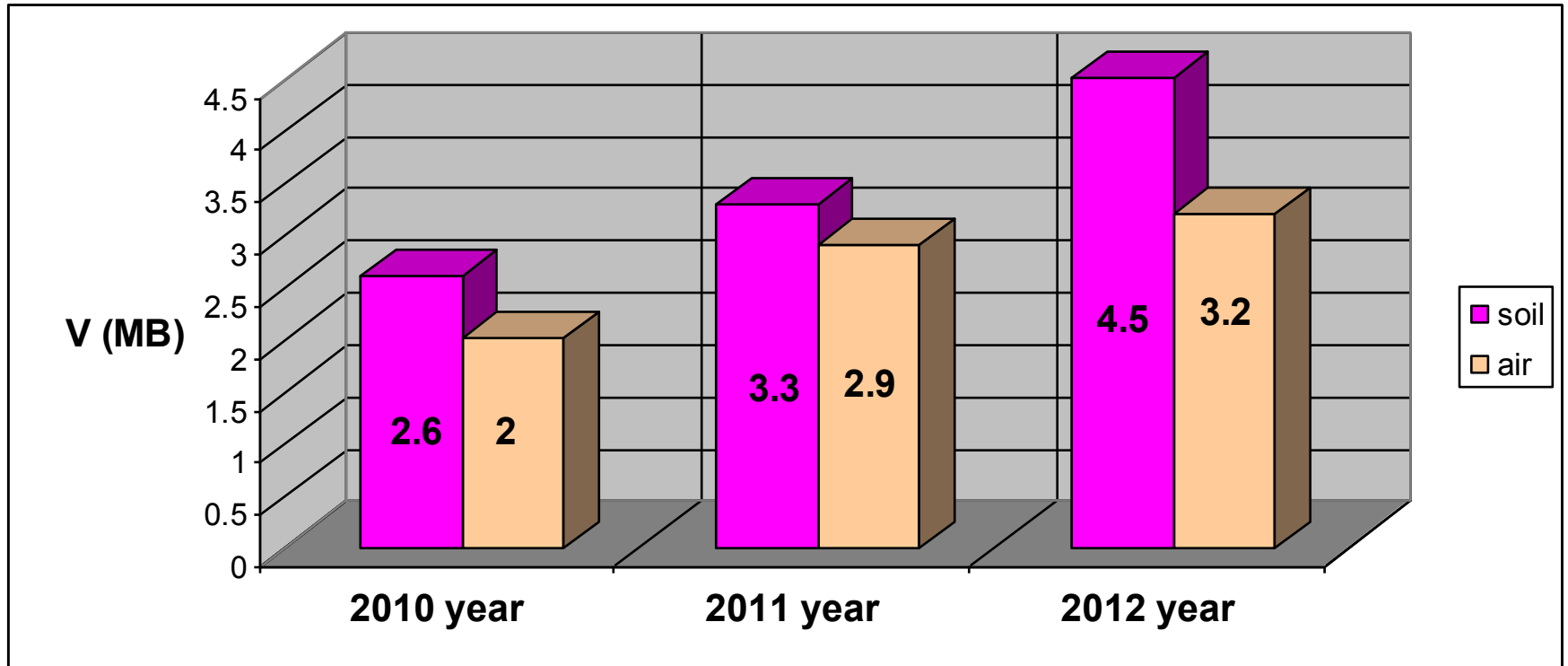
- The aerosol data have started coming from June 6, 2010.
- For all period the problems have been observed two times:
- 1) from Dec 24, 2010 up to Jan 12, 2011 a power line pole was dropped, no data
- 2) from Jul 18, 2012 the data have stopped coming. The problem with the hard drive.

# Data on greenhouse gas emissions



- Data on greenhouse gas emissions have started coming from July 4, 2010.
- The malfunctions were several times. The main reason is short-time power blackout.

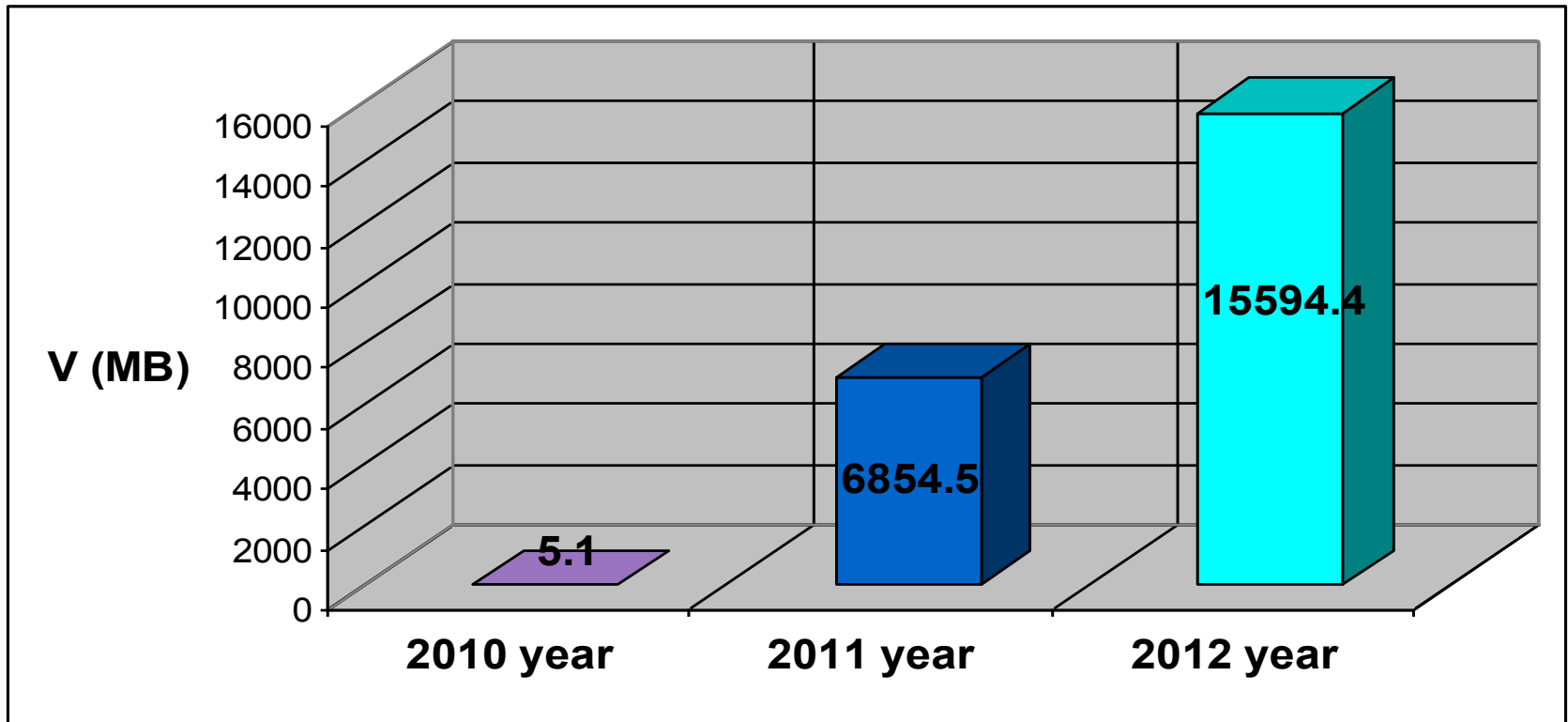
## The data on soil and air



- The data on soil and air have started coming from August 1, 2010.
- The malfunction was only once:
- December 24, 2010 A snowstorm dropped a power line pole.



# Flux and raw fails

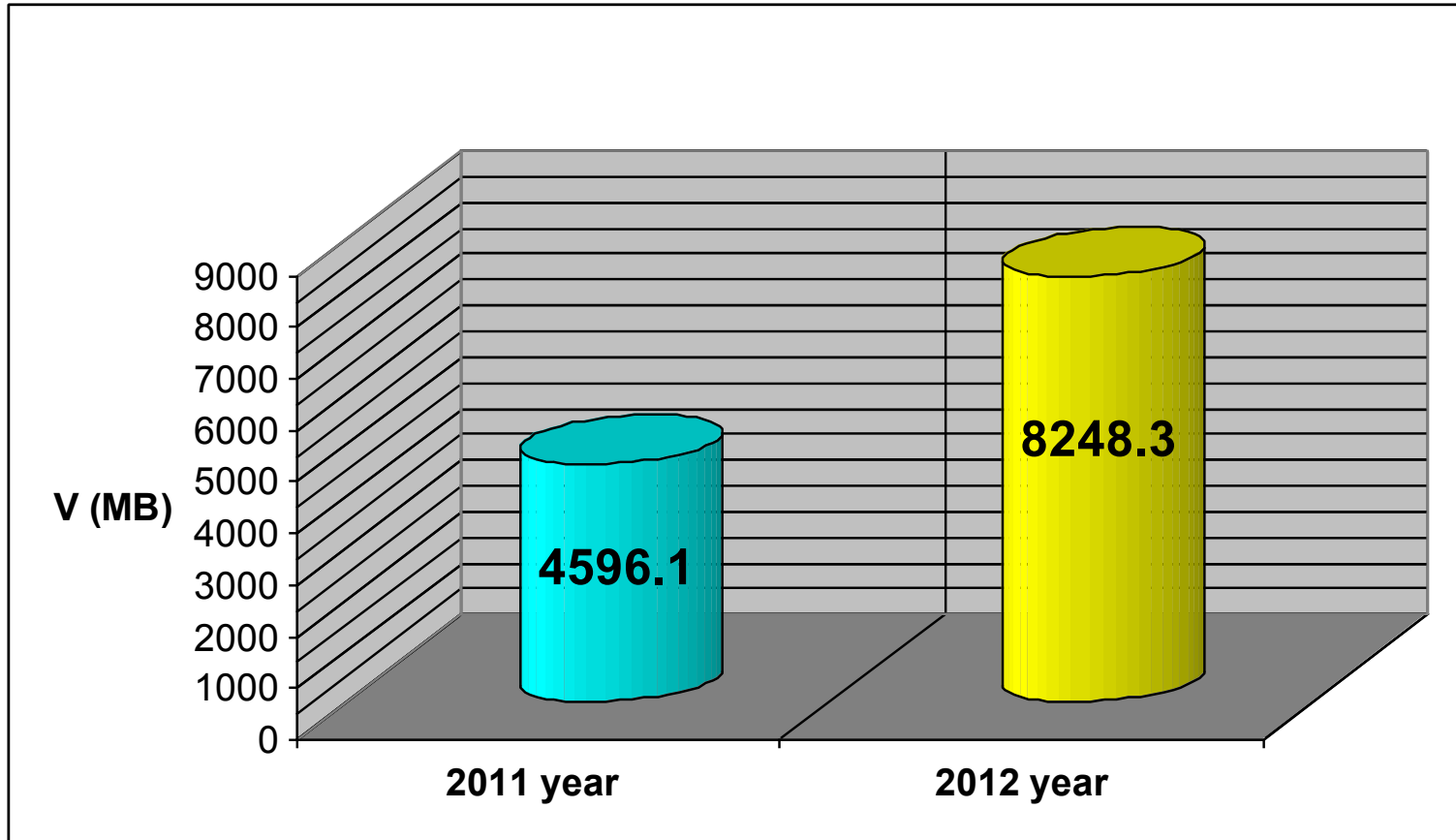


- The flux data have started coming from October 8, 2010.
- Raw fails data have started automatically coming on the AARI server from April 5, 2011.

The data from the tower

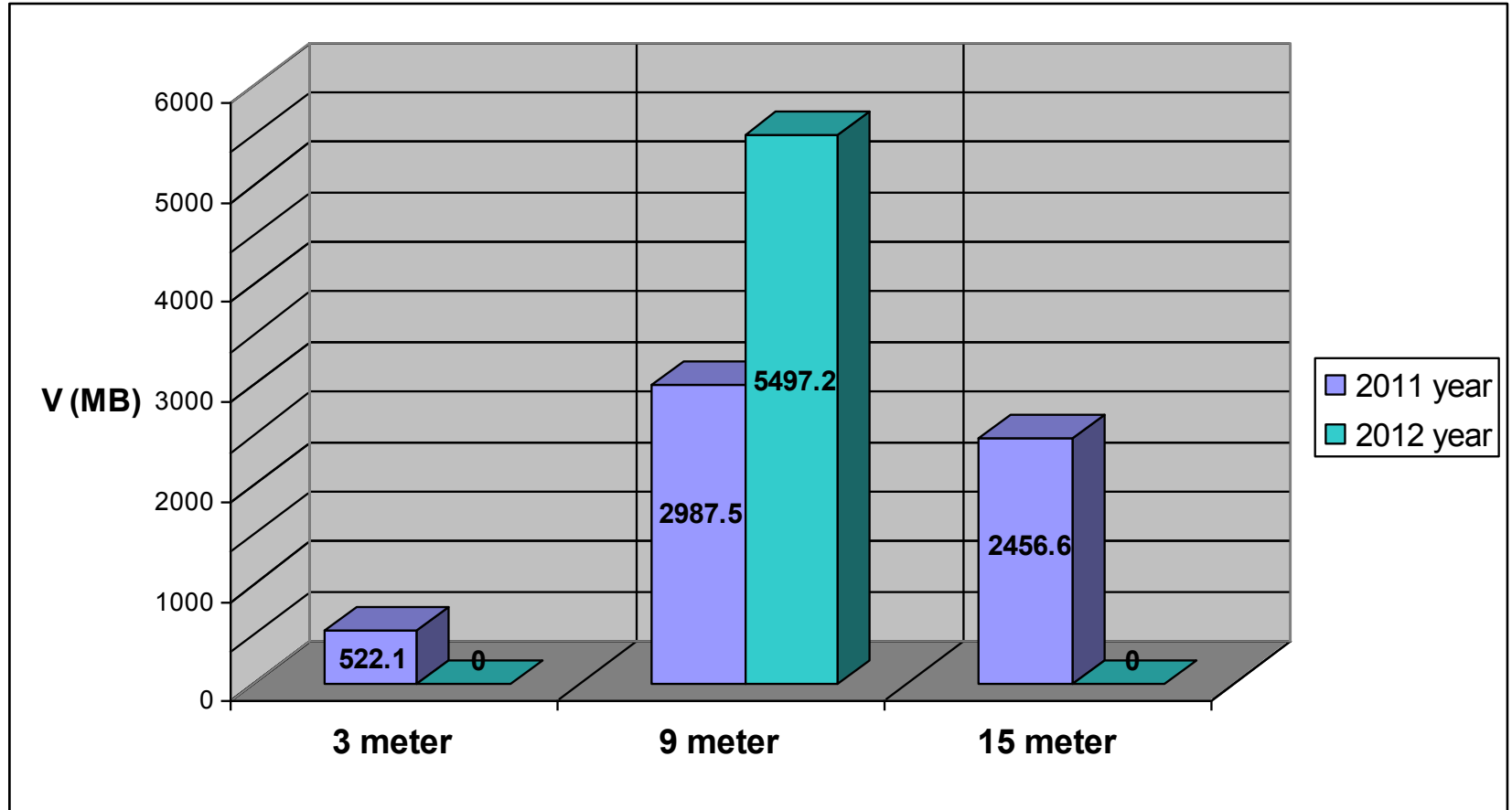
IAP RAS Instruments

# The gas analyzer data



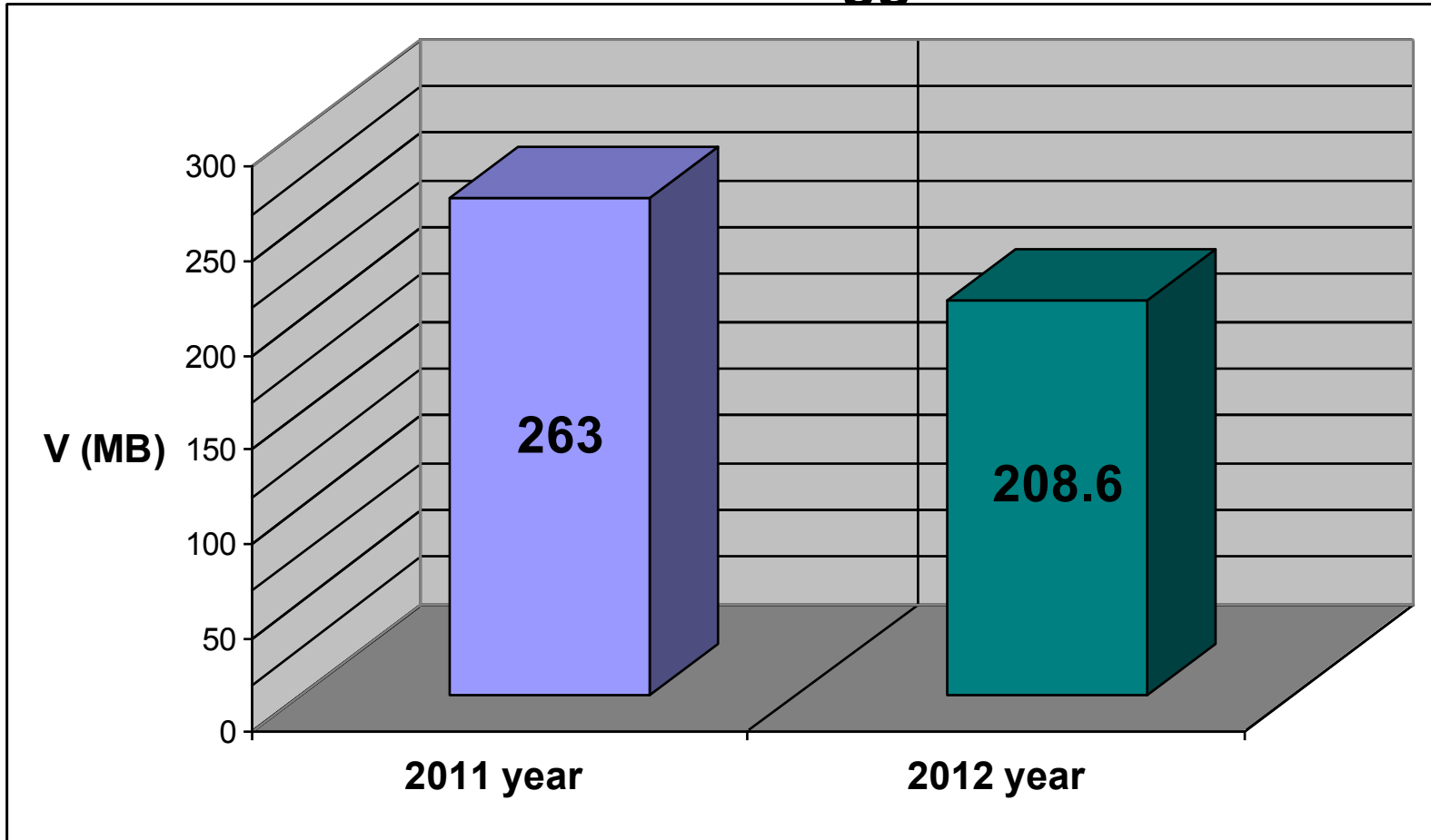
- The data have started coming from April 26, 2011.
- The data arrives on the AARI server every day.

# The acoustic anemometer data



- The data have started coming since April 29, 2011 from all anemometers.
- The malfunctions:
  - 1) The Sonic 3 meter data stopped coming on July 16, 2011.
  - 2) On December 26, 2011 Sonic 15 meter blew away in a strong wind into the tundra.

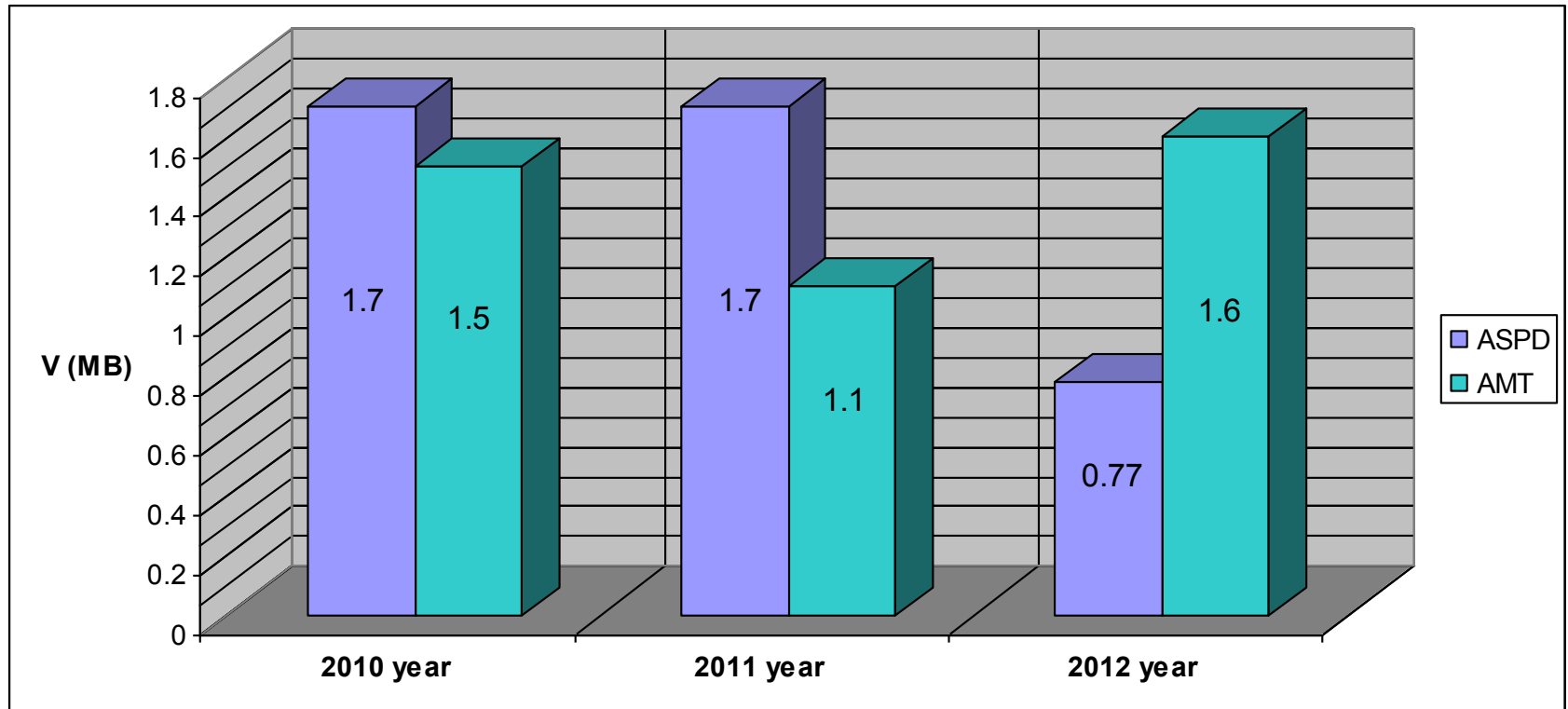
# The data logger



- The data of temperature, wind speed and direction have started coming on the AARI server from April 26, 2011.
- The malfunctions: 1) The reason is short-time power blackout.

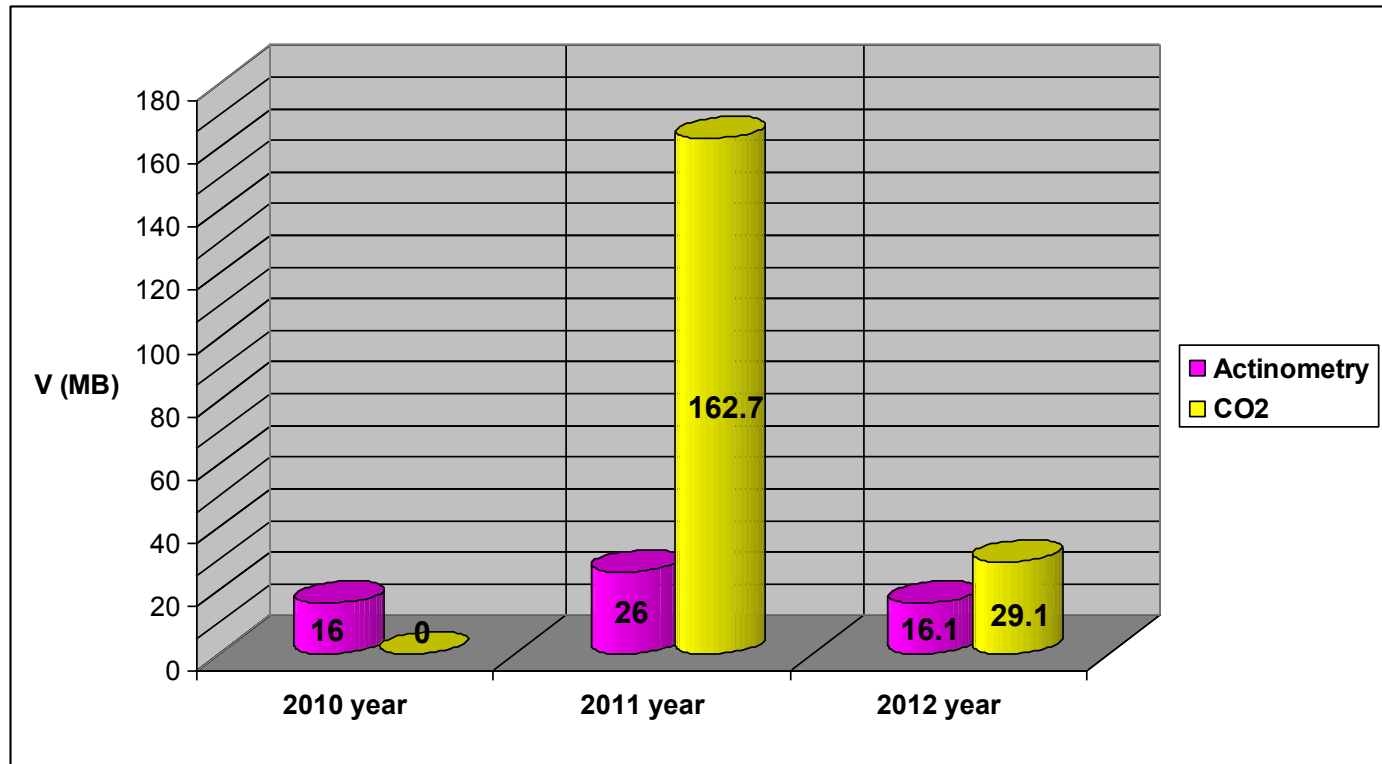
The data from AARI  
instruments

# The data on standard meteorology and exhaust thermometers



- The data on standard meteorology have been registered by the staff of Polyarka, the corresponding files arrive on the AARI server every day in proper time.
- The data from exhaust thermometers have been registered by hands.
- The malfunctions: 1) PC problems in February and April 2012.

# The data on actinometry and greenhouse gas



- The data on actinometry have been registered by hands.
- The data on CO2 have been registered by hands from spring to autumn, have come by e-mail.
- The malfunctions: 1) PC problems in February and April 2012.
- 2) CO2-meter does not work since July 13, 2012.



A photograph of a weathered, two-story building with white stucco walls and dark blue horizontal siding on the upper level. A prominent red sign with yellow Cyrillic text is mounted above a window. The window has a dark wooden frame and multiple panes. To the right, there is a small wooden porch with a red door and a corrugated metal wall. The background shows a cloudy sky and a distant landscape with mountains and a body of water.

**Dear colleagues,**

**Thank you for attention  
to this report on the collected  
data for the last three years.**

**THANKS!**