

WMO SPICE

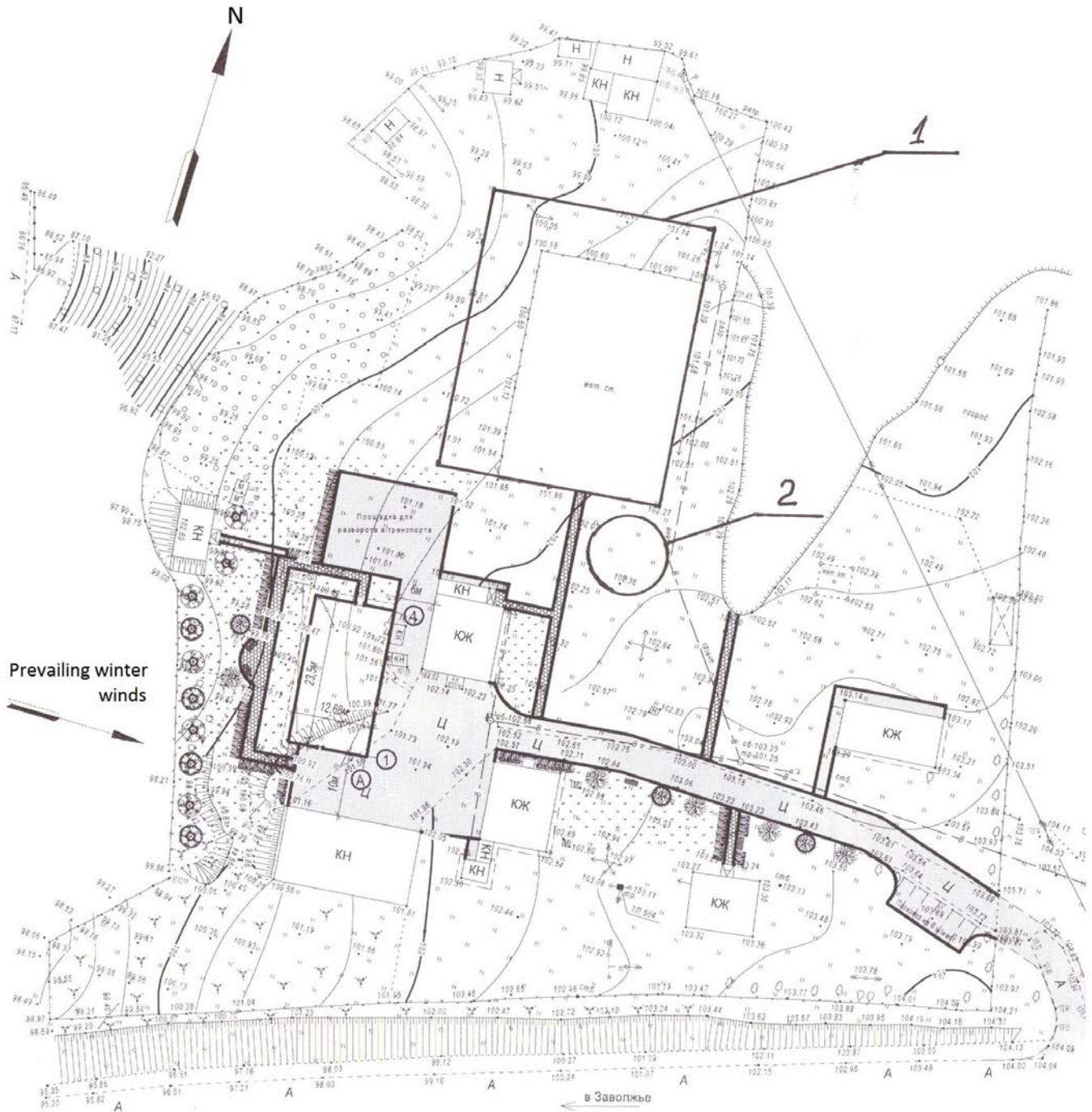
APPENDIX A: PROOF OF PERFORMANCE (POP) FORMS

SECTION A1: STATION INFORMATION

| | |
|-----------------------------|----------------------------------------------|
| Station name | Volga River Hydro Meteorological Observatory |
| Reference town | City of Gorodec, Nijny Novgorod Region |
| Station latitude | 56°41'N |
| Station longitude | 43°25'E |
| Station elevation in metres | 100 |

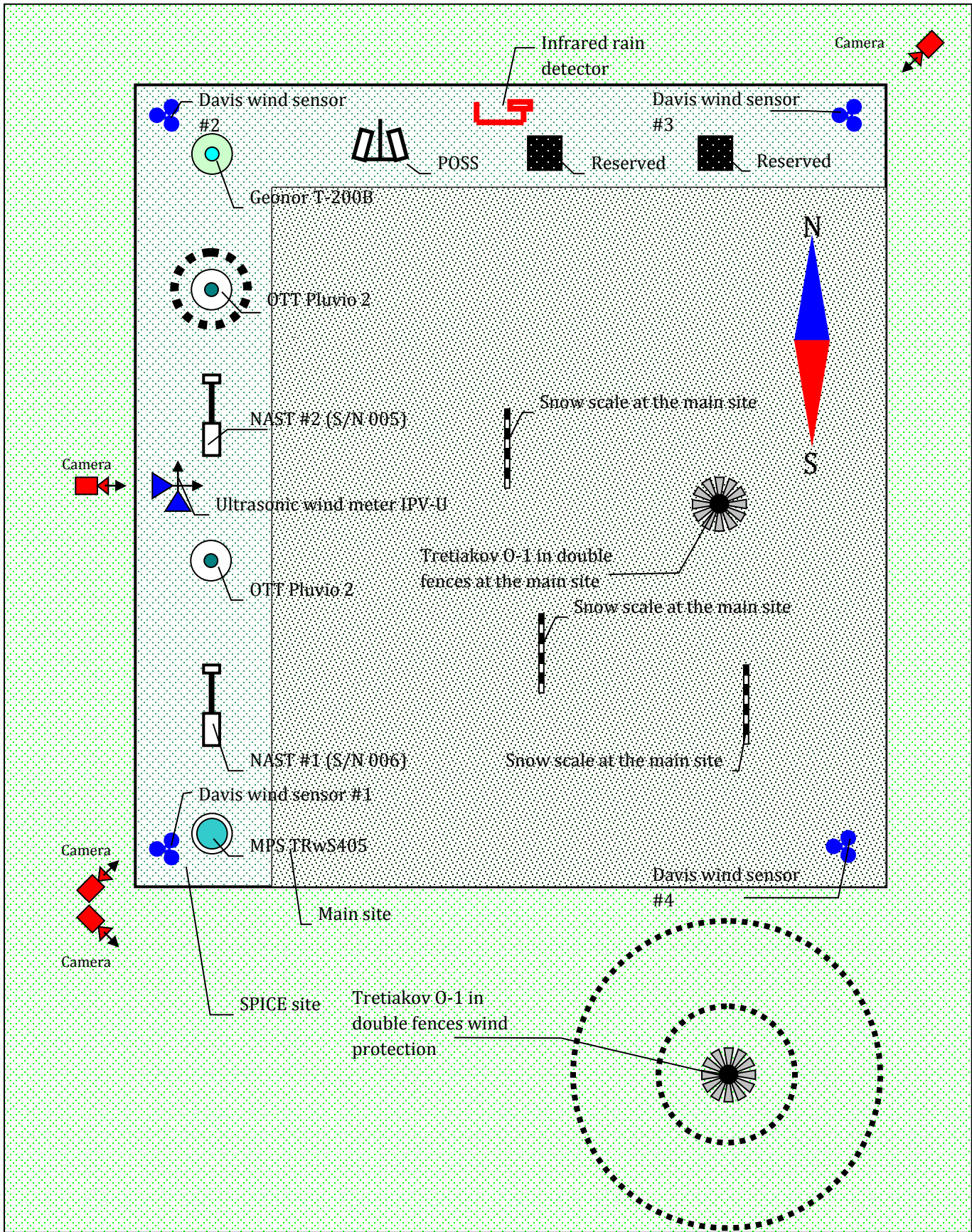
Insert here a Site Layout indicating the location of SPICE references and all instruments, including distances and the direction of the prevailing winter winds. |

Tophography map of Volga river SPICE site

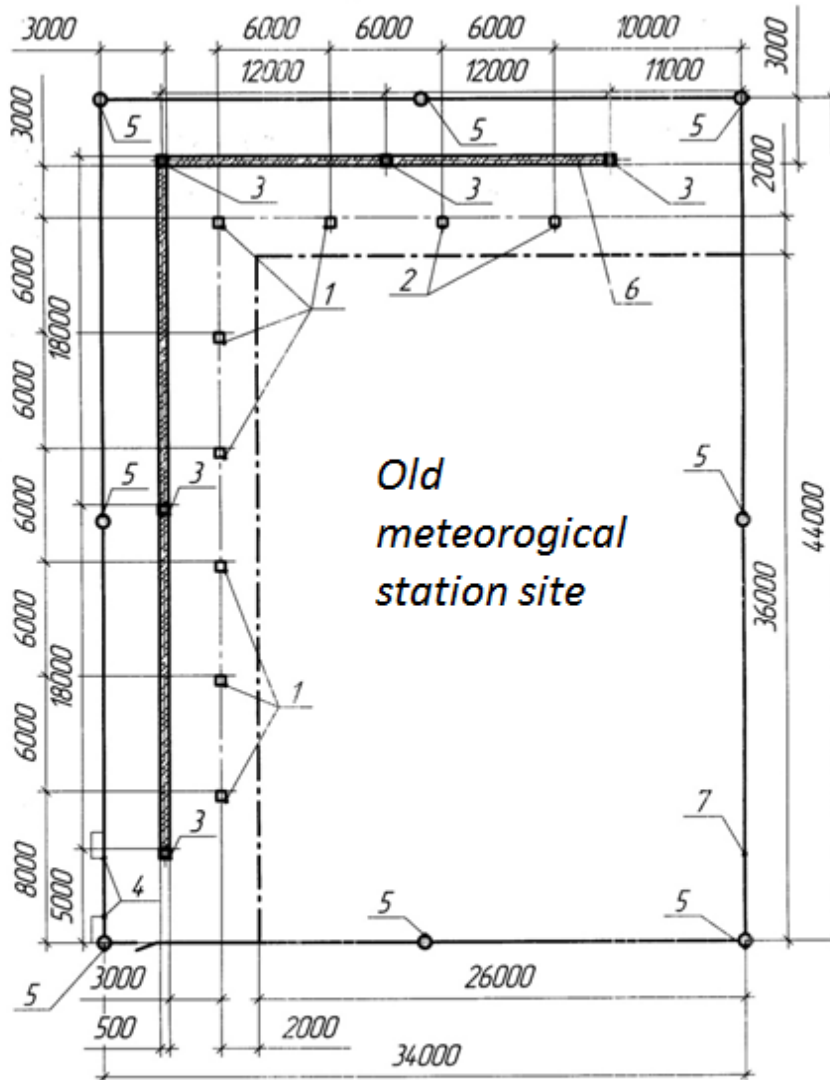


1- New meteorological site prepared for SPICE (See Site Layout below)

2- R1-R2 reference: Tretiakov + GEONOR in double fence



Modernization of Volga River Site for SPICE



All demensions are in mm

Insert here a set of pictures documenting the overall site installation (views from N, E, S, W).

It is suggested to submit here also a horizon / sky view diagram taken with a camera., if available



View from the NORTH



View from the EAST



View from the SOUTH



View from the WEST



Sky view



View from the Camera #4 (in NORTH-EAST corner of the site)



View from Camera #1 (in SOUTH-WEST corner of the site. To Geonor and Tretyakov devices)



View from Camera #2 (in SOUTH-WEST corner of the site.)

For viewing video stream from cameras, please use Microsoft Internet Explorer 10 or previous. Enable ActiveX widget, visit the site at address <http://89.109.52.39/> and permit installing three application from “BEWARD”. Please use Login “ak67” and password “vgmo2013” for access.

SECTION A2: SPICE Field Working Reference System configuration

Field Reference Type R1 (Manual)

| | |
|-------------------------------------------------------|------------------------------------------|
| Measurement frequency, planned | Twice per 24 hours (03:00 and 15:00 UTC) |
| Measurement methodology planned (volume, weight, etc) | Volume |

Additional information required: Provide details of the planned measurement procedure.

Collecting volume is replaced twice per 24 hours on the empty one. The volume with precipitation is transferred to the laboratory. The collecting volume is covered with the cap and warmed at room temperature, and immediately after melting of all contents, liquid water is transferred to the certified chemical glass. The glass has marks for each 0.1mm in terms of precipitation.

Configuration of the DFIR fence

| | |
|--------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|
| Description of surrounding obstacles (including distance/direction from, height, and type) | 40 meters to the building (max height 5m) in west direction from DFIR |
| Diameter | 12m/4m |
| Height of the outer fence (measured at the top) | 3.5m |
| Height of the inner fence (measured at the top) | 3.0m |
| Length of slats | 1.5m |
| Width of slats | 5sm |
| Slat material | plastic |

Collector and shield specifications

| | |
|------------------------------------------------------------|-----------------------|
| Model | 0-1 (Tretyakov gauge) |
| Inlet area | 200 sq.sm |
| Installation height (measured at the top of the collector) | 3m |
| Number of collectors available for the experiment | 2 |
| Shield type | Tretyakov shield |

Picture. Field Reference Type R1 (Manual)



Table. Field Calibration of Reference Type R1 (Manual)

Not applicable: measuring of volume with the certified chemical glasses

48h Observation Table for Reference Type R1 (manual)

НАБЛЮДЕНИЯ за радиации
по 2-м радиометрам
за февраль 2014г.

03/02 15/12

| Дата | Монор | мкБк/ч | подпись | Монор | мкБк/ч | подпись |
|------|-------|--------|---------|-------|--------|---------|
| 1.02 | — | — | Челс | — | — | Челс |
| 2.02 | — | — | Челс | — | — | Челс |
| 3.02 | 0.0 | 0.0 | Челс | 0.0 | 0.0 | Челс |
| 4.02 | 0.2 | 0.1 | Челс | 2.8 | 3.0 | Челс |
| 5.02 | 0.2 | 0.1 | Челс | 0.0 | 0.0 | Челс |
| 6.02 | — | — | Челс | 0.1 | 0.1 | Челс |
| 7.02 | 0.0 | 0.0 | Челс | 0.0 | 0.0 | Челс |
| 8.02 | 0.0 | 0.0 | Челс | — | — | Челс |

Field Reference Type R3 (Automatic)

| | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| Presence of a WG with a single Alter shield? | X Yes <input type="checkbox"/> No |
| Presence of a WG with no shield? | X Yes <input type="checkbox"/> No |
| Description of surrounding obstacles (including distance/direction from, height, and type) | 30m to 1 floor type building from South-West direction |
| Distance between WGs (as close as possible, but exceeding minimum distance between gauges for a Class 1 siting configuration (as per WMO guidelines): Generally a flat area within 10m of instrument. This area surrounded by generally open space with a slope of less than 1:3 (19°) that is considered to be representative of the large scale area. | 12m |

Weighing gauge (1 of 2)

| | |
|-------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Make and model | OTT "Pluvio-200" |
| Serial number | 360033 |
| Firmware version (if applicable) | Not applicable (N\A) |
| Number of transducers (if applicable) | N\A |
| Height of installation (measured from the top of the gauge) | 2m |
| Heater configuration and algorithm | N\A |
| Output data message format | <pre> date time Inten RT(mm) Accum RT(mm) Accum NRT (mm) Acc total (mm) Bucket RT Bucket NRT T cell Heater Status T controller U supply T rim 08/11/2013 00:00:00 +0000.00 +0000.00 +0000.00 +0000.00 +0249.15 +0249.15 +11.2 +000 +000 +11.2 +24.8 +09.9 </pre> |
| Frequency of data sampling | 1min |

Weighing gauge (2 of 2)

| | |
|----------------------------------|--------------------|
| Make and model | OTT - "Pluvio-200" |
| Serial number | 311951 |
| Firmware version (if applicable) | N\A |

| | | | | | | | | | | | | | | | | | |
|-------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|---------------|---------------|-------|----------|----------------|----------------|--------|----------|------------|---------------|-------------|------------|-----------|--|---|
| Number of transducers (if applicable) | N\A | | | | | | | | | | | | | | | | |
| Height of installation (measured from the top of the gauge) | 2m | | | | | | | | | | | | | | | | |
| Heater configuration and algorithm | N\A | | | | | | | | | | | | | | | | |
| Output data message format | <p>OTT Pluvio 2 logger V 1.20 device type OTT Pluvio2 with ALTER protection at VGMO station position #5, port #5</p> <table> <tr> <td>date time</td> <td>Inten RT (mm)</td> <td>Accum RT (mm)</td> <td>Accum</td> </tr> <tr> <td>NRT (mm)</td> <td>Acc total (mm)</td> <td>Bucket RT (mm)</td> <td>Bucket</td> </tr> <tr> <td>NRT (mm)</td> <td>T cell (C)</td> <td>Heater Status</td> <td>T contr (C)</td> </tr> <tr> <td>supply (V)</td> <td>T rim (C)</td> <td></td> <td>U</td> </tr> </table> <p>25/11/2014 00:00:00 0.00 0.00 0.00 0.00 501.17 501.18 -8.2 48 0 -7.3 12.1 0.0</p> | date time | Inten RT (mm) | Accum RT (mm) | Accum | NRT (mm) | Acc total (mm) | Bucket RT (mm) | Bucket | NRT (mm) | T cell (C) | Heater Status | T contr (C) | supply (V) | T rim (C) | | U |
| date time | Inten RT (mm) | Accum RT (mm) | Accum | | | | | | | | | | | | | | |
| NRT (mm) | Acc total (mm) | Bucket RT (mm) | Bucket | | | | | | | | | | | | | | |
| NRT (mm) | T cell (C) | Heater Status | T contr (C) | | | | | | | | | | | | | | |
| supply (V) | T rim (C) | | U | | | | | | | | | | | | | | |
| Frequency of data sampling | 1min | | | | | | | | | | | | | | | | |

Single Alter shield

| | |
|---------------------------------------------|-----------------------------------|
| According to the SPICE instructions? | Yes X No |
| Attached to the post of the weighing gauge? | X Yes <input type="checkbox"/> No |
| If different, provide details: | No any shield are used |

Precipitation detector

| | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------------|------|-------|--------------------|---|-------|-------|--------------------|---|-------|-------|--------------------|---|-------|-------|--------------------|---|-------|-------|
| Make and model | Aqua Nubis Ltd. mod "AN-01" | | | | | | | | | | | | | | | | | | | | |
| output data message format | <table> <tr> <td>date time</td> <td>count/min.</td> <td>summ</td> <td>I(mm)</td> </tr> <tr> <td>11/12/2013 0:00:37</td> <td>1</td> <td>58337</td> <td>0.057</td> </tr> <tr> <td>11/12/2013 0:01:37</td> <td>1</td> <td>58338</td> <td>0.057</td> </tr> <tr> <td>11/12/2013 0:02:37</td> <td>1</td> <td>58339</td> <td>0.057</td> </tr> <tr> <td>11/12/2013 0:03:37</td> <td>0</td> <td>58339</td> <td>0.000</td> </tr> </table> | date time | count/min. | summ | I(mm) | 11/12/2013 0:00:37 | 1 | 58337 | 0.057 | 11/12/2013 0:01:37 | 1 | 58338 | 0.057 | 11/12/2013 0:02:37 | 1 | 58339 | 0.057 | 11/12/2013 0:03:37 | 0 | 58339 | 0.000 |
| date time | count/min. | summ | I(mm) | | | | | | | | | | | | | | | | | | |
| 11/12/2013 0:00:37 | 1 | 58337 | 0.057 | | | | | | | | | | | | | | | | | | |
| 11/12/2013 0:01:37 | 1 | 58338 | 0.057 | | | | | | | | | | | | | | | | | | |
| 11/12/2013 0:02:37 | 1 | 58339 | 0.057 | | | | | | | | | | | | | | | | | | |
| 11/12/2013 0:03:37 | 0 | 58339 | 0.000 | | | | | | | | | | | | | | | | | | |
| Data sampling frequency | 1sec | | | | | | | | | | | | | | | | | | | | |
| Height of installation. <i>DAT team recommend the following place for an optical precipitation detector or precipitation type sensor inside the DFIR:</i> | 2m | | | | | | | | | | | | | | | | | | | | |
| <ul style="list-style-type: none"> • Inside the inner fence • 75 cm below the gauge opening, corresponds to half way down the inner fence | | | | | | | | | | | | | | | | | | | | | |

| | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| <p>Location of installation relative to WG in reference system.</p> <p><i>DAT team recommend to locate the optical precipitation detector or precipitation type:</i></p> <ul style="list-style-type: none"> • <i>perpendicular to the main wind direction</i> • <i>if possible using two precipitation sensors at different places to account for different wind directions.</i> • <i>in the middle between Alter and inner fence</i> | <p>Perpendicular to the main wind direction</p> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|

Pictures. Field Reference Type R3 (Automatic).



Weighing Gauge 1



Weighing Gauge 2

Table. Field Calibration of Reference Type R3 (Automatic) Weighing Gauges 1 and 2

| date time | Bucket NRT (mm) | From zero level (mm) |
|------------------|-----------------|----------------------|
| 22.11.2014 11:55 | 255,69 | 0 |
| 22.11.2014 11:56 | 255,69 | 0 |
| 22.11.2014 11:57 | 255,69 | 0 |
| 22.11.2014 11:58 | 255,69 | 0 |
| 22.11.2014 11:59 | 255,69 | 0 |
| 22.11.2014 12:00 | 255,69 | 0 |
| 22.11.2014 12:04 | 305,45 | 49,76 |
| 22.11.2014 12:05 | 305,45 | 49,76 |
| 22.11.2014 12:06 | 305,45 | 49,76 |
| 22.11.2014 12:07 | 305,45 | 49,76 |
| 22.11.2014 12:08 | 305,45 | 49,76 |
| 22.11.2014 12:09 | 305,45 | 49,76 |
| 22.11.2014 12:14 | 355,21 | 99,52 |
| 22.11.2014 12:15 | 355,21 | 99,52 |
| 22.11.2014 12:16 | 355,21 | 99,52 |
| 22.11.2014 12:17 | 355,21 | 99,52 |
| 22.11.2014 12:18 | 355,21 | 99,52 |
| 22.11.2014 12:19 | 355,21 | 99,52 |
| 22.11.2014 12:22 | 405 | 149,31 |
| 22.11.2014 12:23 | 405 | 149,31 |
| 22.11.2014 12:24 | 405 | 149,31 |
| 22.11.2014 12:25 | 405 | 149,31 |
| 22.11.2014 12:26 | 405 | 149,31 |
| 22.11.2014 12:27 | 405 | 149,31 |
| 22.11.2014 12:29 | 454,84 | 199,15 |
| 22.11.2014 12:30 | 454,84 | 199,15 |
| 22.11.2014 12:31 | 454,84 | 199,15 |
| 22.11.2014 12:32 | 454,84 | 199,15 |
| 22.11.2014 12:33 | 454,84 | 199,15 |
| 22.11.2014 12:34 | 454,84 | 199,15 |
| 22.11.2014 12:40 | 504,47 | 248,78 |
| 22.11.2014 12:41 | 504,47 | 248,78 |
| 22.11.2014 12:42 | 504,47 | 248,78 |
| 22.11.2014 12:43 | 504,47 | 248,78 |
| 22.11.2014 12:44 | 504,47 | 248,78 |
| 22.11.2014 12:45 | 504,47 | 248,78 |

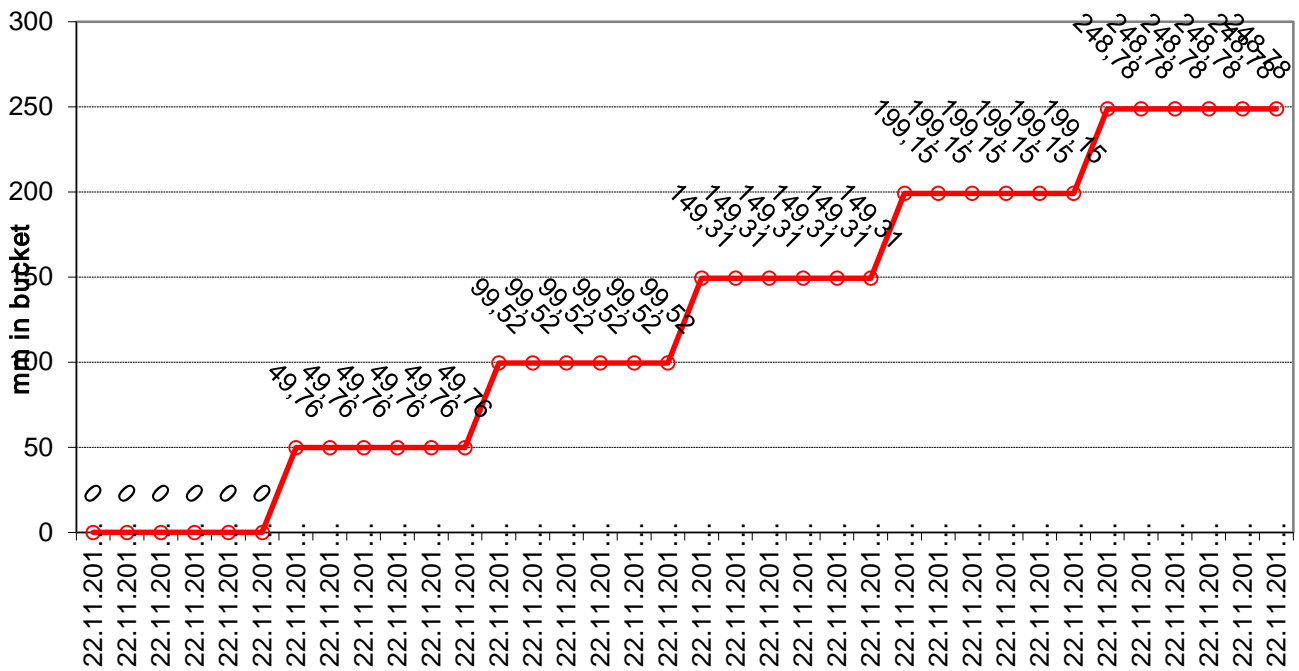
See the data (*.txt files) at <ftp://ftpuser@89.109.52.39/TRwS405/DATA/> (Password: 327688)

| date time | Bucket NRT (mm) | From zero level (mm) |
|------------------|-----------------|----------------------|
| 22.11.2014 11:52 | 240,23 | 0 |
| 22.11.2014 11:53 | 240,23 | 0 |
| 22.11.2014 11:54 | 240,23 | 0 |
| 22.11.2014 11:55 | 240,23 | 0 |
| 22.11.2014 11:56 | 240,23 | 0 |
| 22.11.2014 11:57 | 240,23 | 0 |
| 22.11.2014 12:03 | 290,02 | 49,79 |
| 22.11.2014 12:04 | 290,02 | 49,79 |
| 22.11.2014 12:05 | 290,02 | 49,79 |
| 22.11.2014 12:06 | 290,02 | 49,79 |
| 22.11.2014 12:07 | 290,02 | 49,79 |
| 22.11.2014 12:08 | 290,02 | 49,79 |
| 22.11.2014 12:11 | 339,89 | 99,66 |
| 22.11.2014 12:12 | 339,89 | 99,66 |
| 22.11.2014 12:13 | 339,89 | 99,66 |
| 22.11.2014 12:14 | 339,89 | 99,66 |
| 22.11.2014 12:15 | 339,89 | 99,66 |
| 22.11.2014 12:16 | 339,89 | 99,66 |
| 22.11.2014 12:22 | 389,7 | 149,47 |
| 22.11.2014 12:23 | 389,7 | 149,47 |
| 22.11.2014 12:24 | 389,7 | 149,47 |
| 22.11.2014 12:25 | 389,7 | 149,47 |
| 22.11.2014 12:26 | 389,7 | 149,47 |
| 22.11.2014 12:27 | 389,7 | 149,47 |
| 22.11.2014 12:29 | 439,63 | 199,4 |
| 22.11.2014 12:30 | 439,63 | 199,4 |
| 22.11.2014 12:31 | 439,63 | 199,4 |
| 22.11.2014 12:32 | 439,63 | 199,4 |
| 22.11.2014 12:33 | 439,63 | 199,4 |
| 22.11.2014 12:34 | 439,63 | 199,4 |
| 22.11.2014 12:40 | 489,52 | 249,29 |
| 22.11.2014 12:41 | 489,52 | 249,29 |
| 22.11.2014 12:42 | 489,52 | 249,29 |
| 22.11.2014 12:43 | 489,52 | 249,29 |
| 22.11.2014 12:44 | 489,52 | 249,29 |
| 22.11.2014 12:45 | 489,52 | 249,29 |

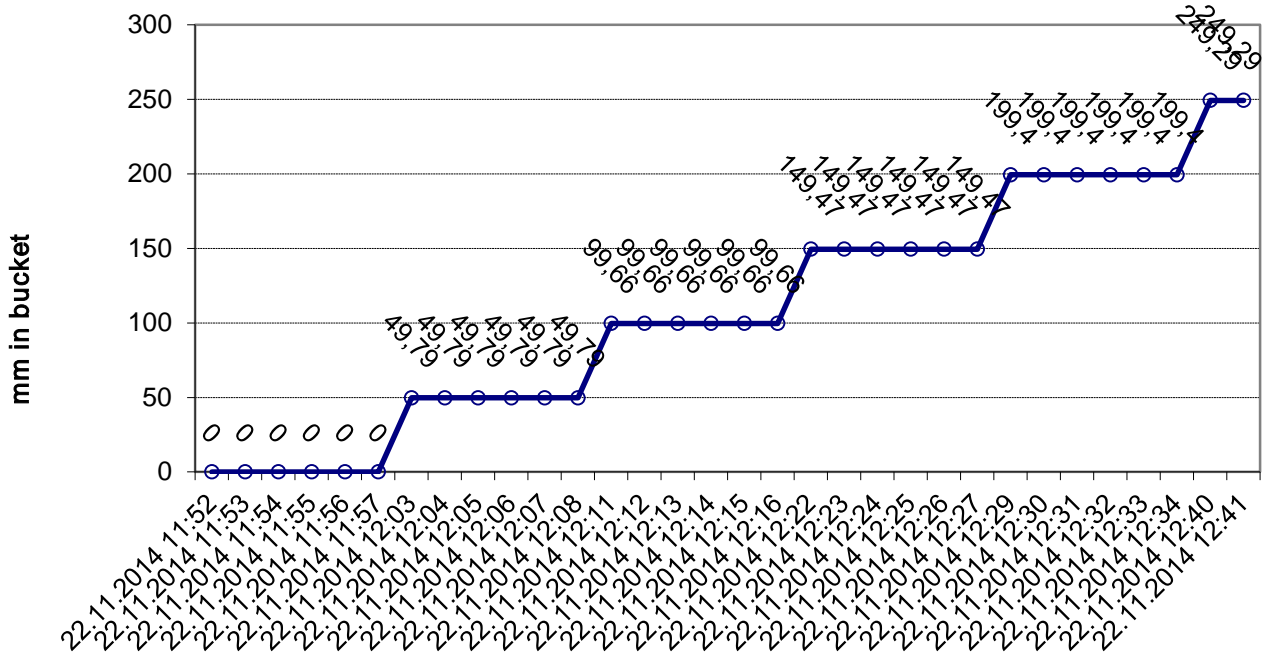
See the data (*.txt files) at ftp://ftpusers@89.109.52.39/OTT_Pluvio2/DATA/ (Password: 327688)

Field Calibration of Reference Type R3 (Automatic) Weighing Gauges 1 and 2

OTT Pluvio 2 with Alter protection
Calibrating

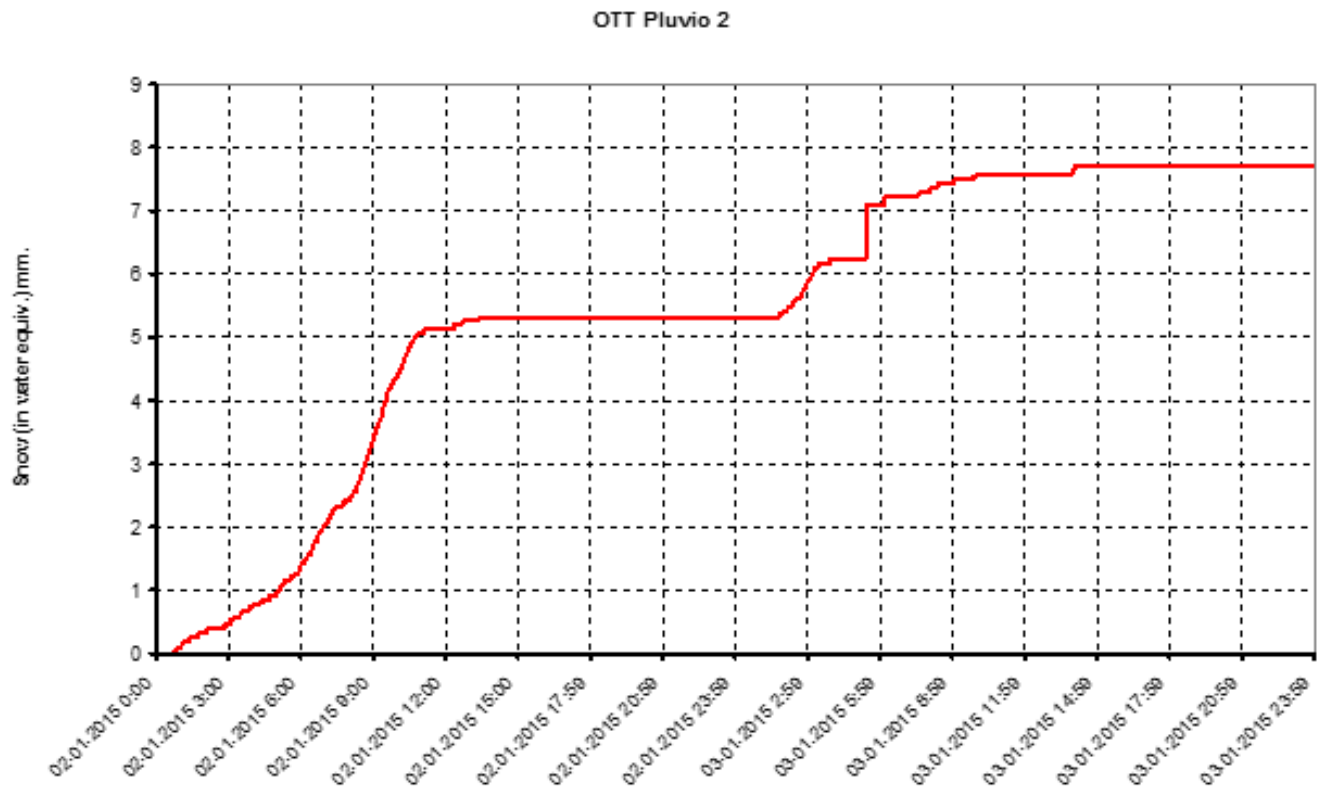
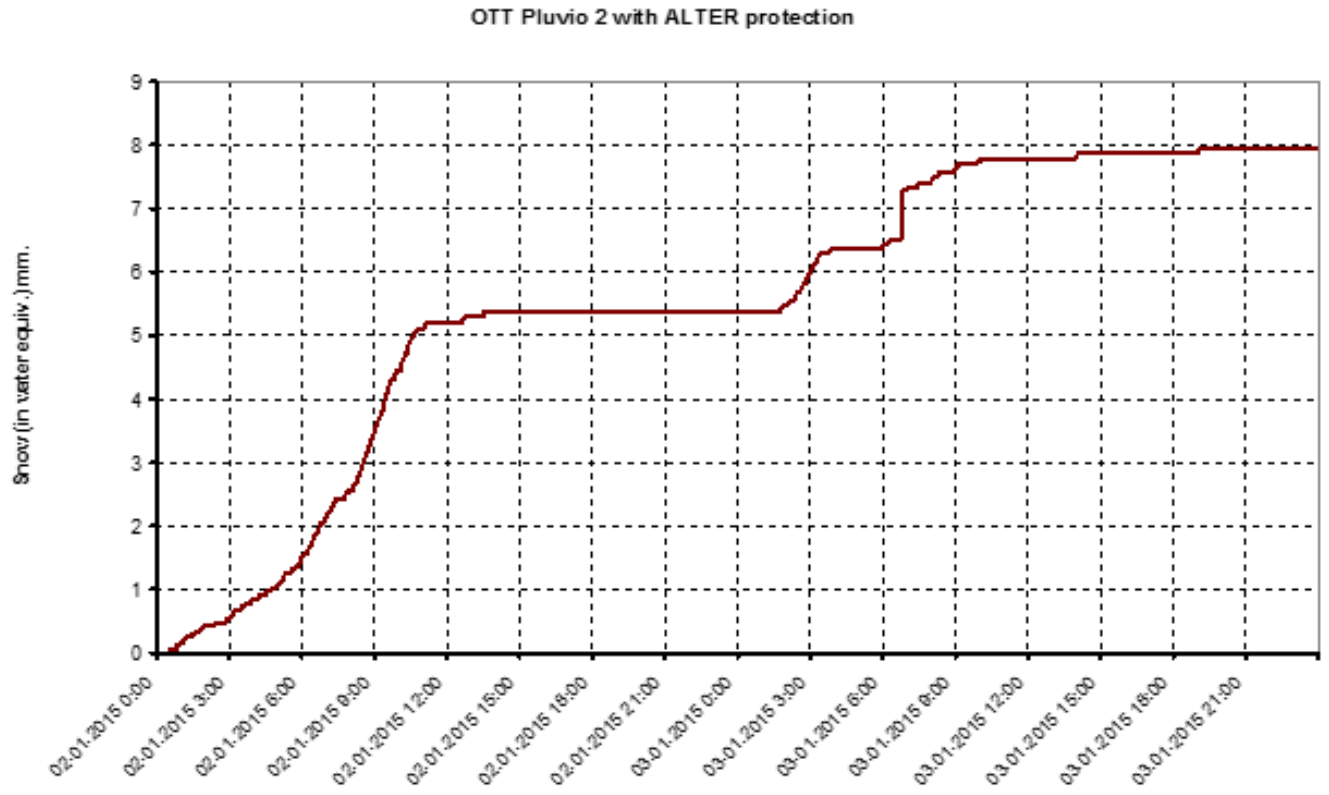


OTT Pluvio 2 (without Alter protection) Calibrating



OTT Pluvio 200

48h Plots. Field Reference Type R3 (Automatic). Weighing Gauges 1 and 2



Field Reference for the Measurement of Snow on the Ground

| | |
|--------------------------|---------------------------------------------------------|
| Method used | manually |
| Equipment used | 3 pcs manual snow sticks (160 cm) centimetre scale |
| Frequency of measurement | once a day at 06.00 utc, video camera monitoring During |

Picture. Field Reference for the Measurement of Snow on the ground



Table. Field Calibration for the Measurement of Snow on the Ground

Not applicable: device was certified before installation by State Standard Committee

SECTION A3: INSTRUMENT METADATA REPORT

For each instrument under test and each instrument used to provide ancillary measurements, an Instrument Metadata Report should be completed in full and submitted as part of the POP Report.

Instrument Metadata Report

IMPORTANT: Please copy this form (as necessary) and complete separately for each instrument under test and each instrument that will be used to provide ancillary measurements during WMO SPICE.

Instruments are:

Davis Anemometer with Transmitter Kit/ "Davis Instruments" (no s/n), DD and FMS (4 unit)

Davis Envoy 8X/ "Davis Instruments" (no s/n), T, Rh, pp

IPV-U/ "LOMO-Meteo" (s/n 140001), DD and FMS

POSS / "Atmospheric Environment Service" (s/n 93-00034)

Ancillary : Optical detector precipitation (s/n 113011)

Instrument Name: Davis Anemometer with Transmitter Kit
instrument number ____1__ of ____4__



| | |
|----------------------------------|---------------------------------------|
| Manufacturer | Davis Instruments |
| Model | Davis Anemometer with Transmitter Kit |
| Serial number | no s/n |
| Firmware version (if applicable) | |

Field configuration

| | |
|--------------------------|------------|
| Location on site | |
| Orientation | horizontal |
| Height (measured at top) | 2,0 m |
| Shield (if applicable) | |
| Heating (if applicable) | |

Data output

| | |
|------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Data communication protocol | Ascii |
| Output data message format (include description of fields) | Wind sensor 1 VGMO place Position 1 - SW-angle Table=ISSData ReceiverID=1 ChannelIndex=0 RecDateTime WindSpeed(m/s) HiWindSpeed(m/s) HiWindDir(deg) DominantDir(deg) 16/10/2014 0:00:00 1.8 3.1 112.5 90.0 16/10/2014 0:01:00 3.4 5.3 45.0 67.5 |
| Height (measured at top) | 2,0 m |
| Data sampling rate | 1 min |
| Data acquisition interval | 1 min |

Instrument Name: Davis Anemometer with Transmitter Kit
instrument number ____2__ of ____4__



| | |
|----------------------------------|---------------------------------------|
| Manufacturer | Davis Instruments |
| Model | Davis Anemometer with Transmitter Kit |
| Serial number | no s/n |
| Firmware version (if applicable) | |

Field configuration

| | |
|--------------------------|------------|
| Location on site | |
| Orientation | horizontal |
| Height (measured at top) | 2,0 m |
| Shield (if applicable) | |
| Heating (if applicable) | |

Data output

| | |
|------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Data communication protocol | Ascii |
| Output data message format (include description of fields) | Wind sensor 1 VGMO place Position 1 - SW-angle Table=ISSData ReceiverID=1 ChannelIndex=0 RecDateTime WindSpeed(m/s) HiWindSpeed(m/s) HiWindDir(deg) DominantDir(deg) 09/10/2014 17:25:00 0.9 1.3 247.5 202.5 09/10/2014 17:26:00 1.0 2.7 180.0 180.0 |
| Height (measured at top) | 2,0 m |
| Data sampling rate | 1 min |
| Data acquisition interval | 1 min |

Instrument Name: Davis Anemometer with Transmitter Kit
instrument number ___3___ of ___4___



| | |
|----------------------------------|---------------------------------------|
| Manufacturer | Davis Instruments |
| Model | Davis Anemometer with Transmitter Kit |
| Serial number | no s/n |
| Firmware version (if applicable) | |

Field configuration

| | |
|--------------------------|------------|
| Location on site | |
| Orientation | horizontal |
| Height (measured at top) | 2,0 m |
| Shield (if applicable) | |
| Heating (if applicable) | |

Data output

| | |
|------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Data communication protocol | Ascii |
| Output data message format (include description of fields) | Wind sensor 1 VGMO place Position 1 - SW-angle Table=ISSData ReceiverID=1 ChannelIndex=0 RecDateTime WindSpeed(m/s) HiWindSpeed(m/s) HiWindDir(deg) DominantDir(deg) 21/11/2014 0:00:00 0.4 0.9 292.5 292.5 21/11/2014 0:01:00 0.2 0.4 292.5 292.5 |
| Height (measured at top) | 2,0 m |
| Data sampling rate | 1 min |
| Data acquisition interval | 1 min |

Instrument Name: Davis Anemometer with Transmitter Kit
instrument number ____ 4 ____ of ____ 4 ____



| | |
|----------------------------------|---------------------------------------|
| Manufacturer | Davis Instruments |
| Model | Davis Anemometer with Transmitter Kit |
| Serial number | no s/n |
| Firmware version (if applicable) | |

Field configuration

| | |
|--------------------------|------------|
| Location on site | |
| Orientation | horizontal |
| Height (measured at top) | 2,0 m |
| Shield (if applicable) | |
| Heating (if applicable) | |

Data output

| | |
|------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Data communication protocol | Ascii |
| Output data message format (include description of fields) | Wind sensor 1 VGMO place Position 1 - SW-angle Table=ISSData ReceiverID=1 ChannelIndex=0 RecDateTime WindSpeed(m/s) HiWindSpeed(m/s) HiWindDir(deg) DominantDir(deg) 20/11/2014 0:01:00 0.9 1.3 292.5 292.5 20/11/2014 0:02:00 0.9 1.3 292.5 292.5 |
| Height (measured at top) | 2,0 m |
| Data sampling rate | 1 min |
| Data acquisition interval | 1 min |

Instrument Name: Davis Envoy 8X

instrument number ____1__ of ____1__

| | |
|----------------------------------|-------------------|
| Manufacturer | Davis Instruments |
| Model | Davis Envoy 8X |
| Serial number | No s/n |
| Firmware version (if applicable) | |

Field configuration

| | |
|--------------------------|------------|
| Location on site | |
| Orientation | horizontal |
| Height (measured at top) | 2,0 m |
| Shield (if applicable) | |
| Heating (if applicable) | |

Data output

| | |
|------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Data communication protocol | Ascii |
| Output data message format (include description of fields) | Inside Temperature, Humidity and Pressure VGMO place Table=InsideData ReceiverID=1 ChannelIndex=8 RecDateTime Templn(°C) Humln(%) Barometer(mm) 09/10/2014 17:24:00 1802.6 61.0 758.1 09/10/2014 17:25:00 15.7 61.0 758.2 |
| Height (measured at top) | 2,0 m |
| Data sampling rate | 1 min |
| Data acquisition interval | 1 min |

Instrument Name: IPV-U

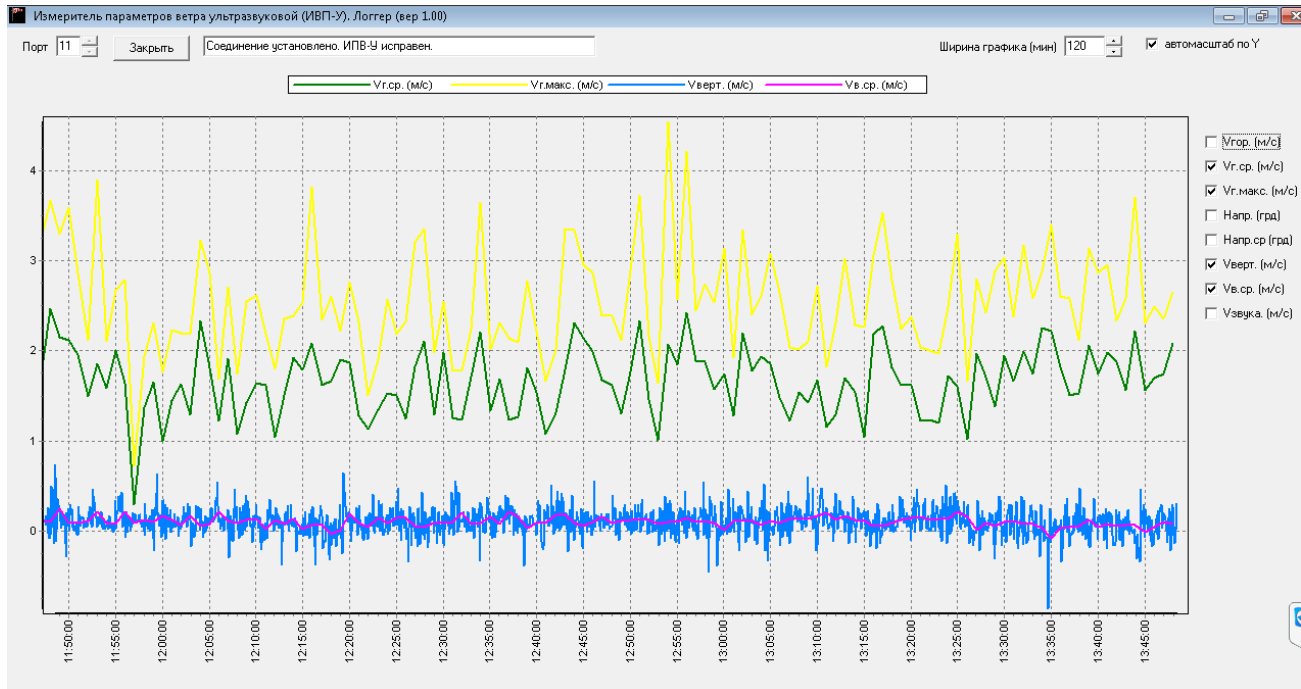
instrument number ____1__ of ____1__



| | |
|---------------|------------|
| Manufacturer | LOMO-Meteo |
| Model | IPV-U |
| Serial number | s/n 140001 |

Field configuration

| | |
|--------------------------|------------|
| Location on site | |
| Orientation | horizontal |
| Height (measured at top) | 2,5 m |
| Shield (if applicable) | |
| Heating (if applicable) | |



Data output

| | |
|---------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Data communication protocol | Ascii |
| Output data message format (include description of fields) | <pre> Ultrasonic anemometer IPV-U Device Name IPVU Year of production 14 Serial number 1 date time Vhor.(m/s) Vhor.avr.(m/s) Vhor.max(m/s) Dir.(degr) Dir.avr.(degr.) Vvert.(m/s) Vvert.avr.(m/s) Vsound(m/s) ErrorCode 17/11/2014 22:40:00 1.02 0.98 1.20 310.29 294.26 0.16 0.15 329.57 00H 17/11/2014 22:41:00 0.90 1.19 1.52 322.24 315.17 0.22 0.16 329.54 00H </pre> |
| Height (measured at top) | 2,5 m |
| Data sampling rate | 1 min |
| Data acquisition interval | 1 min |

Instrument Name: POSS

instrument number ___1___ of ___1___



| | |
|---------------|----------------------------------|
| Manufacturer | Atmospheric Environement Service |
| Model | IPV-U |
| Serial number | s/n 93-00034 |

Field configuration

| | |
|--------------------------|----------|
| Location on site | |
| Orientation | vertical |
| Height (measured at top) | 2,0 m |
| Shield (if applicable) | |
| Heating (if applicable) | |

Data output

| | |
|---------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Data communication protocol | Ascii |
| Output data message format (include description of fields) | Precipitation Occurrence Sensor System (POSS) VGMO station. Russia. 11/01/2015 15:26:21 PS051 56:063:19:44 308.9 281.5 112.2 1.9 60 -1 48 20.1 0.0 2080 |
| Height (measured at top) | 2,0 m |
| Data sampling rate | 1 min |
| Data acquisition interval | 1 min |

Instrument Name: Optical detector precipitation

instrument number__1 of_1_____



| | |
|---------------|--------------------------------|
| Model | Optical detector precipitation |
| Serial number | s/n 113011 |

Field configuration

| | |
|--------------------------|------------|
| Location on site | |
| Orientation | horisontal |
| Height (measured at top) | 2,0 m |
| Shield (if applicable) | |
| Heating (if applicable) | |

Data output

| Data communication protocol | Ascii | | | | | | | | | | | | | | | |
|---------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------------|--------|------|--------|---------------------|---|----|-------|--|---------------------|----|----|-------|--|
| Output data message format (include description of fields) | <table><thead><tr><th>date time</th><th colspan="2">count/min.</th><th>summ</th><th>I (mm)</th></tr></thead><tbody><tr><td>03/12/2013 23:31:07</td><td>3</td><td>58</td><td>0.098</td><td></td></tr><tr><td>03/12/2013 23:32:07</td><td>11</td><td>69</td><td>0.187</td><td></td></tr></tbody></table> | date time | count/min. | | summ | I (mm) | 03/12/2013 23:31:07 | 3 | 58 | 0.098 | | 03/12/2013 23:32:07 | 11 | 69 | 0.187 | |
| date time | count/min. | | summ | I (mm) | | | | | | | | | | | | |
| 03/12/2013 23:31:07 | 3 | 58 | 0.098 | | | | | | | | | | | | | |
| 03/12/2013 23:32:07 | 11 | 69 | 0.187 | | | | | | | | | | | | | |
| Height (measured at top) | 2,0 m | | | | | | | | | | | | | | | |
| Data sampling rate | 1 min | | | | | | | | | | | | | | | |
| Data acquisition interval | 1 min | | | | | | | | | | | | | | | |

INSTRUMENTS UNDER TEST

Instrument Name: Automatic Remote Snow depth sensor “NAST”

Instrument number 1 of 2

| | |
|----------------------------------|------------|
| Manufacturer | Aqua Nubis |
| Model | NAST |
| Serial number | 000005 |
| Firmware version (if applicable) | |

Field configuration

| | |
|--------------------------|-----|
| Location on site | |
| Orientation | |
| Height (measured at top) | |
| Shield (if applicable) | |
| Heating (if applicable) | N\A |

Data output

| | |
|-------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Data communication protocol | |
| Output data message format (include description of fields), ASCII | <pre> DeviceID: ABS NAST #5 port5 DevicePosition: VGMO, Experimental place, Pos 5 date time Nmeass H(mm) status Hzero(mm) Tin(°C) RHin(%) OFFS(°) HOR(°) VERT(°) Aavr(°) A1(°) SCO1 A2(°) SCO2 A3(°) SCO3 A4(°) SCO4 StopDown StopUp RHout(%) Tout(°C) Tunder(°C) Ch5(V) Ch6(V) Ch7(V) 18/12/2013 00:00:07 138 250.91 1000 1985.35 14.59 41.92 2.0873 -0.0140 90.0000 40.9325 40.2704 4.4083 42.0260 3.8020 41.6186 3.4383 39.8152 3.2592 2 2 161.24 127.51 14.22 1.6124 1.6751 1.6948 </pre> |
| Data sampling frequency | 5min |



Просмотр графиков

Исходные данные | График

На график выводятся колонки, расположенные слева, после меток времени.
Перетащите необходимые колонки влево, используя мышь.

| date time | Nmeass | H[mm] | status | Hzer0[mm] | Tin[°C] | RHrh[%] | OFFS[°] | HOR[°] | VERT[°] | Aavn[°] | A1[°] | SCD1 | A2[°] | SCD2 | A3[°] | SCD3 | A4[°] | SCD4 | StopDown | StopUp | RHout[%] | Tout[°C] | Tunder[°C] | Ch5[V] | Ch6[V] |
|---------------------|--------|--------|--------|-----------|---------|---------|---------|---------|---------|---------|---------|--------|---------|--------|---------|--------|---------|--------|----------|--------|----------|----------|------------|--------|--------|
| 21/12/2013 00:00:07 | 425 | 202.64 | 1000 | 1985.35 | 12.42 | 35.47 | 2.0676 | -0.0111 | 90.0000 | 41.6331 | 41.2422 | 2.9568 | 42.6294 | 3.4785 | 42.2063 | 4.6007 | 40.7890 | 3.0714 | 2 | 2 | 167.32 | 138.39 | 19.42 | 1.6732 | 1.7839 |
| 21/12/2013 00:15:07 | 426 | 203.95 | 1000 | 1985.35 | 12.42 | 35.51 | 2.0628 | 0.0009 | 90.0000 | 41.6331 | 41.2422 | 2.9568 | 42.6294 | 3.4785 | 42.2063 | 4.6007 | 40.7890 | 3.0714 | 2 | 2 | 167.32 | 138.39 | 19.42 | 1.6732 | 1.7839 |
| 21/12/2013 00:30:07 | 427 | 201.51 | 1000 | 1985.35 | 12.41 | 35.59 | 2.0718 | -0.0050 | 90.0000 | 41.7304 | 41.2786 | 4.0222 | 42.6430 | 2.4060 | 42.2289 | 2.7889 | 40.7713 | 4.2479 | 2 | 2 | 167.32 | 138.41 | 19.43 | 1.6732 | 1.7841 |
| 21/12/2013 00:45:07 | 429 | 202.99 | 1000 | 1985.35 | 12.43 | 35.63 | 2.0635 | -0.0015 | 90.0000 | 41.7069 | 41.2115 | 2.3664 | 42.6402 | 3.2472 | 42.2518 | 3.3747 | 40.7241 | 2.6998 | 2 | 2 | 167.34 | 138.43 | 19.45 | 1.6734 | 1.7843 |
| 21/12/2013 01:00:07 | 430 | 202.60 | 1000 | 1985.35 | 12.41 | 35.68 | 2.0667 | -0.0059 | 90.0000 | 41.7130 | 41.1950 | 3.1287 | 42.6445 | 3.5917 | 42.2431 | 3.1990 | 40.7895 | 3.9001 | 2 | 2 | 167.36 | 138.44 | 19.46 | 1.6736 | 1.7844 |
| 21/12/2013 01:15:07 | 431 | 201.62 | 1000 | 1985.35 | 12.41 | 35.72 | 2.0546 | 0.0087 | 90.0000 | 41.7288 | 41.2388 | 3.4976 | 42.6726 | 3.3350 | 42.2217 | 4.4083 | 40.7820 | 3.5839 | 2 | 2 | 167.37 | 138.47 | 19.46 | 1.6737 | 1.7847 |
| 21/12/2013 01:30:07 | 432 | 201.47 | 1000 | 1985.35 | 12.40 | 35.72 | 2.0641 | -0.0015 | 90.0000 | 41.7311 | 41.2311 | 4.5080 | 42.6911 | 2.3594 | 42.2383 | 4.1753 | 40.7638 | 3.0551 | 2 | 2 | 167.39 | 138.48 | 19.47 | 1.6739 | 1.7848 |
| 21/12/2013 01:45:07 | 433 | 202.14 | 1000 | 1985.35 | 12.36 | 35.64 | 2.0619 | 0.0050 | 90.0000 | 41.7204 | 41.2495 | 2.7588 | 42.6763 | 2.4855 | 42.2219 | 3.2745 | 40.7339 | 4.1096 | 2 | 2 | 167.39 | 138.50 | 19.46 | 1.6739 | 1.7850 |
| 21/12/2013 02:00:07 | 434 | 201.09 | 1000 | 1985.35 | 12.35 | 35.63 | 2.0556 | 0.0046 | 90.0000 | 41.7372 | 41.3064 | 2.2509 | 42.7142 | 3.2387 | 42.2066 | 3.9791 | 40.7215 | 2.6013 | 2 | 2 | 167.38 | 138.50 | 19.46 | 1.6738 | 1.7850 |
| 21/12/2013 02:15:07 | 435 | 201.70 | 1000 | 1985.35 | 12.34 | 35.63 | 2.0644 | 0.0025 | 90.0000 | 41.7274 | 41.2883 | 2.9981 | 42.6376 | 4.7889 | 42.2706 | 3.6552 | 40.7132 | 2.3476 | 2 | 2 | 167.39 | 138.52 | 19.47 | 1.6739 | 1.7852 |
| 21/12/2013 02:30:07 | 436 | 201.35 | 1000 | 1985.35 | 12.34 | 35.70 | 2.0610 | 0.0003 | 90.0000 | 41.7330 | 41.2966 | 4.3461 | 42.6318 | 3.8239 | 42.2475 | 3.0714 | 40.7952 | 1.1785 | 2 | 2 | 167.39 | 138.52 | 19.48 | 1.6739 | 1.7852 |
| 21/12/2013 02:45:07 | 437 | 201.46 | 1000 | 1985.35 | 12.37 | 35.73 | 2.0699 | -0.0084 | 90.0000 | 41.7312 | 41.2535 | 3.6530 | 42.6910 | 4.7481 | 42.2219 | 3.8064 | 40.7983 | 2.8597 | 2 | 2 | 167.42 | 138.55 | 19.49 | 1.6742 | 1.7855 |
| 21/12/2013 03:00:07 | 438 | 201.94 | 1000 | 1985.35 | 12.36 | 35.74 | 2.0647 | 0.0068 | 90.0000 | 41.7235 | 41.3193 | 2.9364 | 42.6779 | 2.8382 | 42.2394 | 1.9692 | 40.6575 | 4.2804 | 2 | 2 | 167.45 | 138.59 | 19.51 | 1.6745 | 1.7859 |
| 21/12/2013 03:15:07 | 439 | 202.36 | 1000 | 1985.35 | 12.29 | 35.67 | 2.0669 | -0.0012 | 90.0000 | 41.7168 | 41.2956 | 2.7809 | 42.6536 | 2.9078 | 42.2145 | 3.8658 | 40.7035 | 2.5033 | 2 | 2 | 167.46 | 138.60 | 19.51 | 1.6746 | 1.7860 |
| 21/12/2013 03:30:07 | 440 | 199.96 | 1000 | 1985.35 | 12.27 | 35.56 | 2.0574 | 0.0065 | 90.0000 | 41.7551 | 41.2896 | 3.6040 | 42.6422 | 3.5418 | 42.2474 | 4.3512 | 40.8412 | 3.7133 | 2 | 2 | 167.47 | 138.60 | 19.51 | 1.6747 | 1.7860 |
| 21/12/2013 03:45:07 | 441 | 202.34 | 1000 | 1985.35 | 12.23 | 35.54 | 2.0763 | -0.0167 | 90.0000 | 41.7171 | 41.1999 | 3.0930 | 42.6608 | 3.6209 | 42.2229 | 1.7127 | 40.7849 | 4.6440 | 2 | 2 | 167.47 | 138.60 | 19.52 | 1.6747 | 1.7860 |
| 21/12/2013 04:00:07 | 442 | 201.20 | 1000 | 1985.35 | 12.24 | 35.93 | 2.0531 | 0.0059 | 90.0000 | 41.7354 | 41.2744 | 2.6247 | 42.6584 | 3.3333 | 42.2262 | 1.6465 | 40.7824 | 2.9981 | 2 | 2 | 167.46 | 138.60 | 19.52 | 1.6746 | 1.7860 |
| 21/12/2013 04:15:07 | 443 | 203.51 | 1000 | 1985.35 | 12.22 | 36.22 | 2.0506 | 0.0074 | 90.0000 | 41.6985 | 41.2487 | 1.8738 | 42.6683 | 2.2136 | 42.2162 | 4.0014 | 40.6607 | 2.4698 | 2 | 2 | 167.48 | 138.63 | 19.53 | 1.6748 | 1.7863 |
| 21/12/2013 04:30:07 | 444 | 201.91 | 1000 | 1985.35 | 12.16 | 36.55 | 2.0537 | 0.0028 | 90.0000 | 41.7241 | 41.2459 | 2.8597 | 42.7082 | 4.6536 | 42.2370 | 2.2336 | 40.7053 | 2.8597 | 2 | 2 | 167.44 | 138.62 | 19.52 | 1.6744 | 1.7862 |
| 21/12/2013 04:45:07 | 445 | 203.78 | 1000 | 1985.35 | 12.13 | 36.67 | 2.0568 | 0.0040 | 90.0000 | 41.6942 | 41.2314 | 3.8873 | 42.6182 | 2.8848 | 42.2139 | 3.7431 | 40.7134 | 4.3729 | 2 | 2 | 167.40 | 138.60 | 19.51 | 1.6740 | 1.7860 |
| 21/12/2013 05:00:07 | 446 | 204.66 | 1000 | 1985.35 | 12.15 | 36.88 | 2.0662 | -0.0043 | 90.0000 | 41.6802 | 41.1726 | 3.5292 | 42.6313 | 3.4059 | 42.2099 | 3.5606 | 40.7072 | 2.6247 | 2 | 2 | 167.41 | 138.62 | 19.52 | 1.6741 | 1.7862 |
| 21/12/2013 05:15:07 | 447 | 204.61 | 1000 | 1985.35 | 12.17 | 36.87 | 2.0535 | 0.0108 | 90.0000 | 41.6809 | 41.1440 | 3.6953 | 42.6424 | 4.9318 | 42.2344 | 3.1429 | 40.7028 | 3.5024 | 2 | 2 | 167.44 | 138.65 | 19.53 | 1.6744 | 1.7865 |
| 21/12/2013 05:30:07 | 448 | 205.26 | 1000 | 1985.35 | 12.21 | 36.81 | 2.0627 | -0.0040 | 90.0000 | 41.6705 | 41.2176 | 4.7422 | 42.6227 | 1.9322 | 42.1976 | 3.1073 | 40.6442 | 4.5898 | 2 | 2 | 167.50 | 138.68 | 19.56 | 1.6750 | 1.7868 |
| 21/12/2013 05:45:07 | 449 | 204.84 | 1000 | 1985.35 | 12.19 | 36.70 | 2.0679 | -0.0043 | 90.0000 | 41.6773 | 41.1706 | 3.4059 | 42.6530 | 2.7669 | 42.2179 | 2.3190 | 40.6678 | 3.9721 | 2 | 2 | 167.55 | 138.73 | 19.58 | 1.6755 | 1.7873 |
| 21/12/2013 06:00:07 | 450 | 202.73 | 1000 | 1985.35 | 12.21 | 36.60 | 2.0646 | -0.0028 | 90.0000 | 41.7109 | 41.2317 | 2.4585 | 42.6609 | 3.0185 | 42.2129 | 2.7508 | 40.7382 | 2.9059 | 2 | 2 | 167.56 | 138.75 | 19.58 | 1.6756 | 1.7875 |
| 21/12/2013 06:15:07 | 451 | 202.48 | 1000 | 1985.35 | 12.18 | 36.45 | 2.0630 | -0.0003 | 90.0000 | 41.7149 | 41.2265 | 1.5092 | 42.6582 | 4.3063 | 42.2250 | 3.8873 | 40.7500 | 3.3400 | 2 | 2 | 167.57 | 138.76 | 19.59 | 1.6757 | 1.7876 |
| 21/12/2013 06:30:07 | 452 | 203.28 | 1000 | 1985.35 | 12.17 | 36.38 | 2.0554 | 0.0040 | 90.0000 | 41.7022 | 41.1916 | 3.7845 | 42.6751 | 3.6209 | 42.2091 | 4.3780 | 40.7330 | 3.9665 | 2 | 2 | 167.56 | 138.76 | 19.59 | 1.6756 | 1.7876 |
| 21/12/2013 06:45:07 | 453 | 202.35 | 1000 | 1985.35 | 12.17 | 36.35 | 2.0598 | -0.0012 | 90.0000 | 41.7171 | 41.1932 | 3.5917 | 42.6841 | 2.1499 | 42.2289 | 3.9101 | 40.7621 | 2.8067 | 2 | 2 | 167.57 | 138.76 | 19.59 | 1.6757 | 1.7876 |
| 21/12/2013 07:00:07 | 454 | 203.23 | 1000 | 1985.35 | 12.17 | 36.29 | 2.0665 | -0.0040 | 90.0000 | 41.7030 | 41.1717 | 3.4657 | 42.6747 | 3.7431 | 42.2251 | 4.0346 | 40.7407 | 3.4140 | 2 | 2 | 167.59 | 138.80 | 19.61 | 1.6759 | 1.7880 |
| 21/12/2013 07:15:07 | 455 | 203.20 | 1000 | 1985.35 | 12.17 | 36.33 | 2.0643 | -0.0015 | 90.0000 | 41.7035 | 41.1795 | 2.3944 | 42.6778 | 4.0675 | 42.2257 | 3.5730 | 40.7311 | 2.2706 | 2 | 2 | 167.59 | 138.80 | 19.61 | 1.6759 | 1.7880 |
| 21/12/2013 07:30:07 | 456 | 203.17 | 1000 | 1985.35 | 12.16 | 36.34 | 2.0637 | 0.0050 | 90.0000 | 41.7040 | 41.1770 | 1.8379 | 42.6828 | 4.4981 | 42.2019 | 3.1340 | 40.7544 | 4.3321 | 2 | 2 | 167.61 | 138.83 | 19.62 | 1.6761 | 1.7883 |

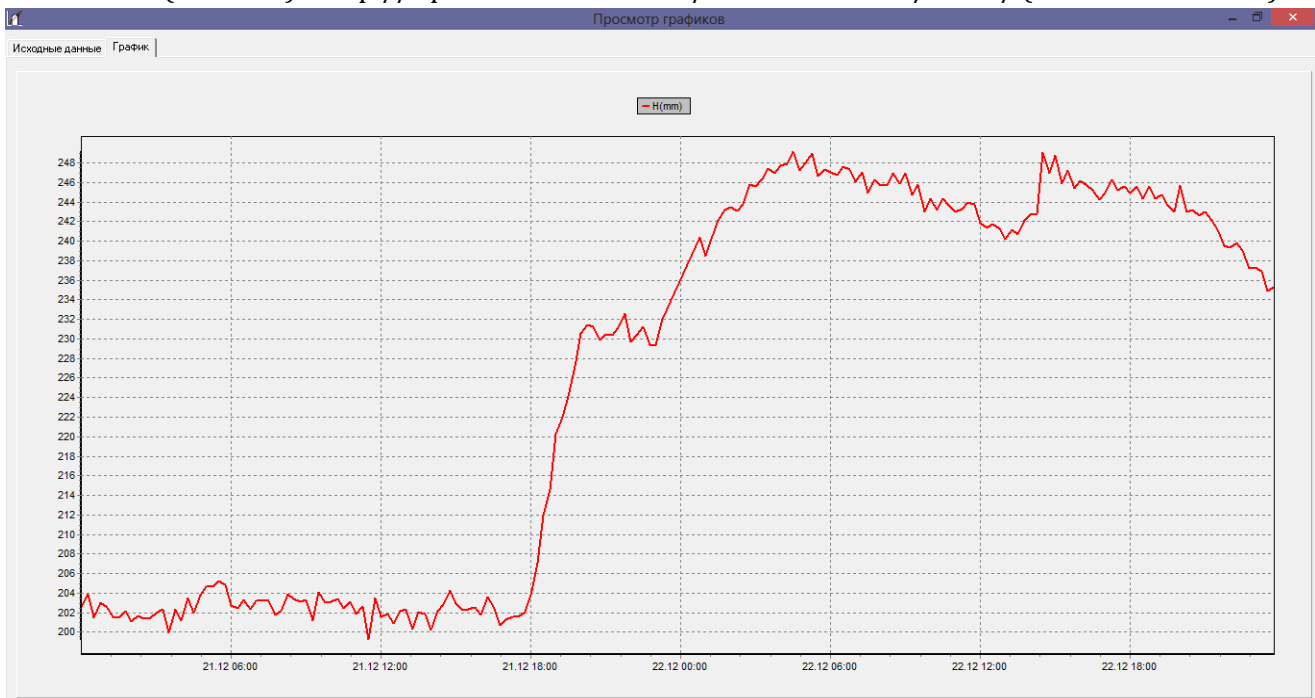
Колво линий: 1

График

Сохранить

Выход

See the data (*.txt files) at <ftp://ftpuser@89.109.52.39/NAST-sn000005/DATA/> (Password: 327688)



Instrument Name: Automatic Remote Snow depth sensor "NAST"

Instrument number 2 of 2

| | |
|----------------------------------|------------|
| Manufacturer | Aqua Nubis |
| Model | NAST |
| Serial number | 000006 |
| Firmware version (if applicable) | |

Field configuration

| | |
|--------------------------|-----|
| Location on site | |
| Orientation | |
| Height (measured at top) | |
| Shield (if applicable) | |
| Heating (if applicable) | N\A |

Data output

| | |
|-------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Data communication protocol | |
| Output data message format (include description of fields), ASCII | <pre> DeviceID: ABS NAST #6 port3 DevicePosition: VGMO, Experimental place, Pos 3 date time Nmeass H(mm) status Hzero(mm) Tin(°C) RHin(%) OFFS(°) HOR(°) VERT(°) Aavr(°) A1(°) SCO1 A2(°) SCO2 A3(°) SCO3 A4(°) SCO4 StopDown StopUp RHout(%) Tout(°C) Tunder(°C) Ch5(V) Ch6(V) Ch7(V) 30/11/2013 00:00:06 68 25.32 1004 2016.61 13.57 </pre> |
| Data sampling frequency | 5min |



Instrument Name: _Geonor “T200B”_____

Instrument number _1___ of ___1__

| | |
|----------------------------------|---------|
| Manufacturer | Geonor |
| Model | “T200B” |
| Serial number | 108212 |
| Firmware version (if applicable) | N\A |

Field configuration

| | |
|--------------------------|----------|
| Location on site | South |
| Orientation | N\A |
| Height (measured at top) | 2 |
| Shield (if applicable) | No fence |
| Heating (if applicable) | N\A |

Data output

| | |
|-------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Data communication protocol | RS232 |
| Output data message format (include description of fields), ASCII | <pre> date time mm/min. RainSumm CurrentLevel Tranducers 31/10/2013 22:32:00 0.10 0.10 27.90 3 31/10/2013 22:33:00 0.00 0.10 27.90 3 </pre> |
| Data sampling frequency | 1min |

Instrument Picture.



Field calibration (if any).

Просмотр графиков

Исходные данные | График

**На график выводятся колонки, расположенные слева, после меток времени.
Перетащите необходимые колонки влево, используя мышь**

| date time | mm/min. | RainSumm | CurrentLevel | Tranducers | Level1 | Level2 | Level3 | Freq1 | Freq2 | Freq3 |
|---------------------|---------|----------|--------------|------------|--------|--------|--------|----------|----------|----------|
| 06/01/2014 11:45:00 | 0.10 | 0.00 | 232.40 | 3 | 231.12 | 232.93 | 233.15 | 2036.420 | 2033.115 | 2046.305 |
| 06/01/2014 11:46:00 | 0.00 | 0.00 | 232.40 | 3 | 231.09 | 232.95 | 233.29 | 2036.337 | 2033.183 | 2046.712 |
| 06/01/2014 11:47:00 | 0.00 | 0.00 | 232.40 | 3 | 231.10 | 232.83 | 233.19 | 2036.353 | 2032.828 | 2046.418 |
| 06/01/2014 11:48:00 | 0.00 | 0.00 | 232.40 | 3 | 231.14 | 232.92 | 233.16 | 2036.483 | 2033.090 | 2046.321 |
| 06/01/2014 11:49:00 | 77.80 | 74.20 | 310.20 | 3 | 308.69 | 310.68 | 311.34 | 2256.507 | 2252.939 | 2267.268 |
| 06/01/2014 11:50:00 | 0.00 | 74.20 | 310.20 | 3 | 308.66 | 310.70 | 311.36 | 2256.431 | 2252.990 | 2267.317 |
| 06/01/2014 11:51:00 | 0.10 | 74.30 | 310.30 | 3 | 308.72 | 310.72 | 311.36 | 2256.592 | 2253.034 | 2267.323 |
| 06/01/2014 11:52:00 | 0.00 | 74.30 | 310.30 | 3 | 308.79 | 310.77 | 311.34 | 2256.768 | 2253.162 | 2267.258 |
| 06/01/2014 11:53:00 | 0.00 | 74.30 | 310.30 | 3 | 308.86 | 310.72 | 311.35 | 2256.972 | 2253.028 | 2267.303 |
| 06/01/2014 11:54:00 | 78.00 | 152.30 | 388.30 | 3 | 386.37 | 388.74 | 389.71 | 2455.398 | 2452.067 | 2467.047 |
| 06/01/2014 11:55:00 | 0.00 | 152.30 | 388.30 | 3 | 386.42 | 388.72 | 389.70 | 2455.524 | 2452.014 | 2467.024 |
| 06/01/2014 11:56:00 | 0.10 | 152.40 | 388.40 | 3 | 386.45 | 388.85 | 389.88 | 2455.599 | 2452.330 | 2467.461 |
| 06/01/2014 11:57:00 | 0.00 | 152.40 | 388.40 | 3 | 386.49 | 388.82 | 389.92 | 2455.709 | 2452.255 | 2467.559 |
| 06/01/2014 11:58:00 | 77.60 | 230.00 | 466.00 | 3 | 463.55 | 466.57 | 467.94 | 2636.966 | 2634.390 | 2650.139 |
| 06/01/2014 11:59:00 | 0.50 | 230.50 | 466.50 | 3 | 464.05 | 466.92 | 468.40 | 2638.094 | 2635.177 | 2651.174 |
| 06/01/2014 12:00:00 | -0.10 | 230.40 | 466.40 | 3 | 464.04 | 466.86 | 468.40 | 2638.073 | 2635.048 | 2651.171 |
| 06/01/2014 12:01:00 | 0.00 | 230.40 | 466.40 | 3 | 464.07 | 466.88 | 468.37 | 2638.147 | 2635.098 | 2651.097 |
| 06/01/2014 12:02:00 | 0.10 | 230.50 | 466.50 | 3 | 464.18 | 466.85 | 468.35 | 2638.379 | 2635.031 | 2651.065 |
| 06/01/2014 12:03:00 | 77.80 | 308.30 | 544.30 | 3 | 540.95 | 544.71 | 547.14 | 2806.331 | 2804.598 | 2822.424 |
| 06/01/2014 12:04:00 | 0.50 | 308.80 | 544.80 | 3 | 541.62 | 545.24 | 547.40 | 2807.732 | 2805.712 | 2822.968 |
| 06/01/2014 12:05:00 | 0.00 | 308.80 | 544.80 | 3 | 541.74 | 545.24 | 547.30 | 2808.001 | 2805.718 | 2822.757 |
| 06/01/2014 12:06:00 | 0.00 | 308.80 | 544.80 | 3 | 541.82 | 545.20 | 547.28 | 2808.167 | 2805.644 | 2822.706 |

Добавить

Очистить

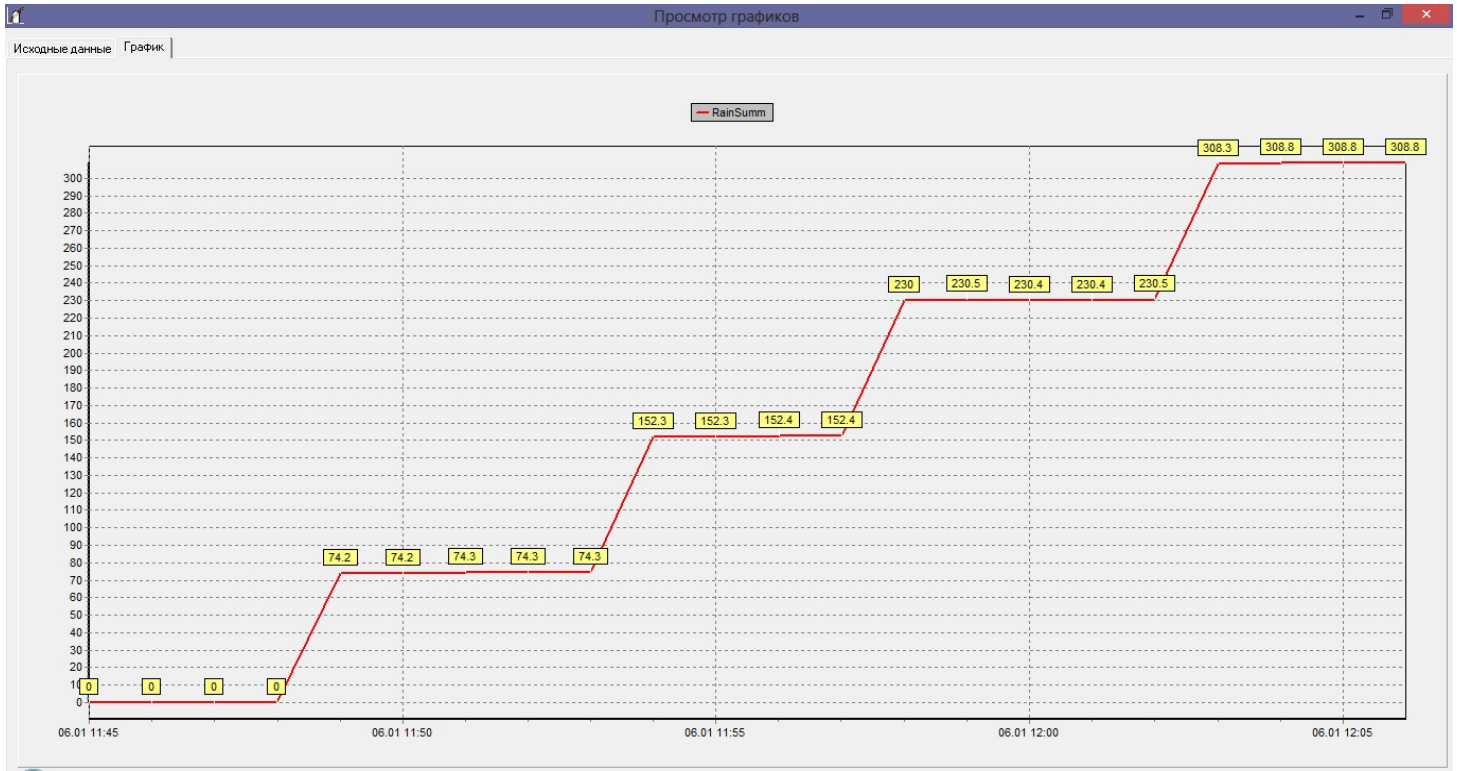
Кол-во линий
1

График

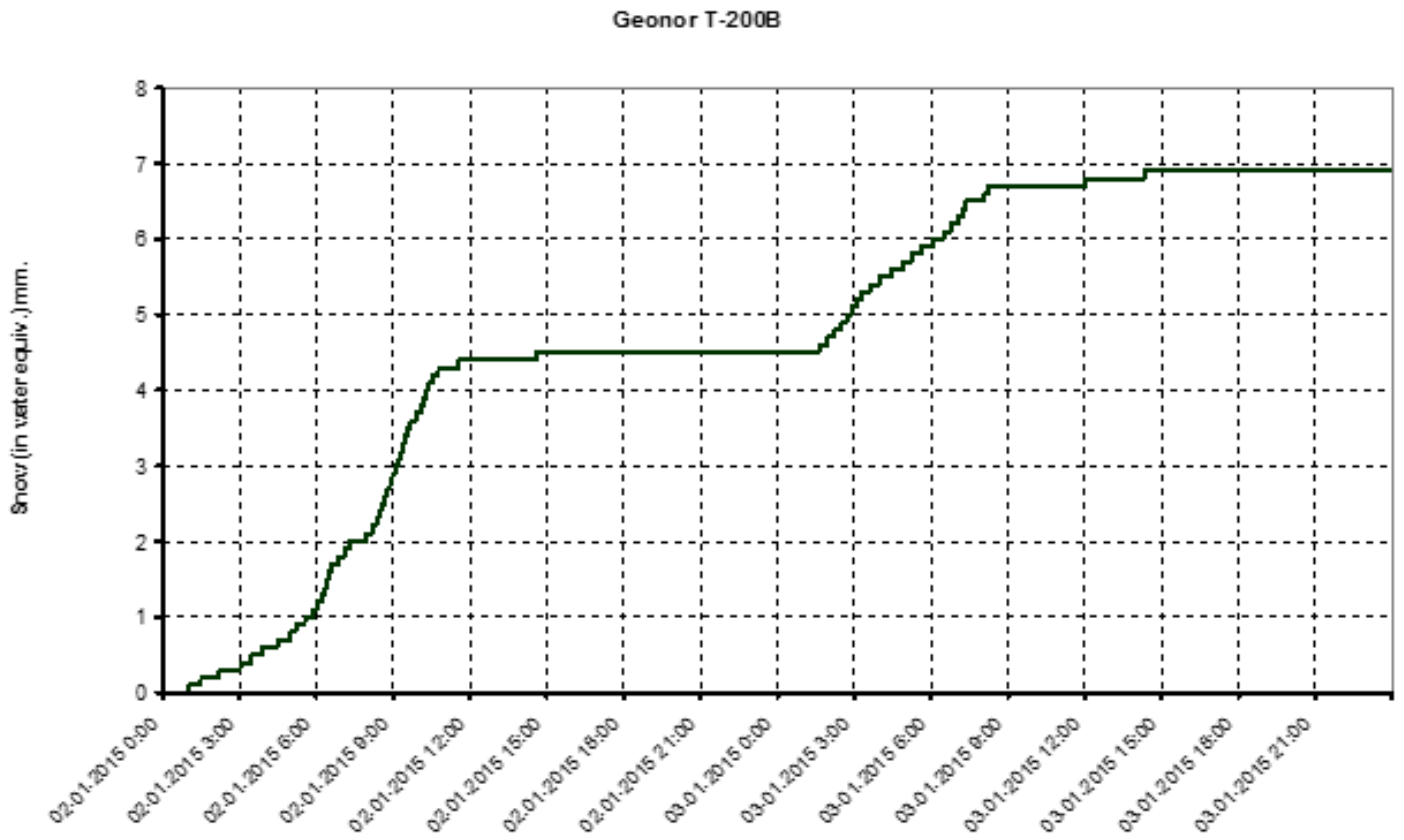
Сохранить

Выход

Field Calibration



48h Plot.



Instrument Name: _MPS “TRwS405”

Instrument number 1 of 1

| | |
|----------------------------------|-----------|
| Manufacturer | MPS |
| Model | “TRwS405” |
| Serial number | 476 |
| Firmware version (if applicable) | N\A |

Field configuration

| | |
|--------------------------|------|
| Location on site | West |
| Orientation | N\A |
| Height (measured at top) | 2 |
| Shield (if applicable) | N\A |
| Heating (if applicable) | N\A |

Data output

| | |
|-------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Data communication protocol | RS232 |
| Output data message format (include description of fields), ASCII | date time mm/min. RainSumm Total weight 12/11/2013 00:00:00 0.000 0.000 2041.878 12/11/2013 00:01:00 0.000 0.000 2041.904 |
| Data sampling frequency | 1min |

Instrument Picture.



Field calibration (if any).

Просмотр графиков

Исходные данные | График

На график выводятся колонки, расположенные слева, после меток времени.
Перетащите необходимые колонки влево, используя мышь

| date time | mm/min | RainSumm | Total weight |
|---------------------|--------|----------|--------------|
| 06/01/2014 13:12:00 | 0.007 | 0.007 | 1499.508 |
| 06/01/2014 13:13:00 | 0.032 | 0.039 | 1500.676 |
| 06/01/2014 13:14:00 | 32.068 | 32.107 | 2806.016 |
| 06/01/2014 13:15:00 | 4.975 | 37.082 | 2993.628 |
| 06/01/2014 13:16:00 | 0.263 | 37.345 | 2993.087 |
| 06/01/2014 13:17:00 | 0.000 | 37.345 | 2990.515 |
| 06/01/2014 13:18:00 | 0.000 | 37.345 | 2991.738 |
| 06/01/2014 13:19:00 | 0.000 | 37.345 | 2991.543 |
| 06/01/2014 13:20:00 | 10.899 | 48.244 | 3451.157 |
| 06/01/2014 13:21:00 | 26.046 | 74.290 | 4487.480 |
| 06/01/2014 13:22:00 | 0.126 | 74.416 | 4487.001 |
| 06/01/2014 13:23:00 | 0.209 | 74.625 | 4485.381 |
| 06/01/2014 13:24:00 | 0.060 | 74.685 | 4487.220 |
| 06/01/2014 13:25:00 | 0.000 | 74.685 | 4486.748 |
| 06/01/2014 13:26:00 | 30.250 | 4.935 | 5718.617 |
| 06/01/2014 13:27:00 | 6.811 | 11.746 | 5980.208 |
| 06/01/2014 13:28:00 | 0.291 | 12.037 | 5981.289 |
| 06/01/2014 13:29:00 | 0.000 | 12.037 | 5980.528 |
| 06/01/2014 13:30:00 | 0.031 | 12.068 | 5982.232 |
| 06/01/2014 13:31:00 | 0.000 | 12.068 | 5982.141 |
| 06/01/2014 13:32:00 | 29.961 | 42.029 | 7202.835 |
| 06/01/2014 13:33:00 | 7.047 | 49.076 | 7473.412 |
| 06/01/2014 13:34:00 | 0.278 | 49.354 | 7473.668 |
| 06/01/2014 13:35:00 | 0.036 | 49.390 | 7474.814 |
| 06/01/2014 13:36:00 | 0.000 | 49.390 | 7474.389 |
| 06/01/2014 13:37:00 | 17.111 | 66.501 | 8182.083 |
| 06/01/2014 13:38:00 | 19.858 | 86.359 | 8970.556 |

Кол-во линий: 1

График

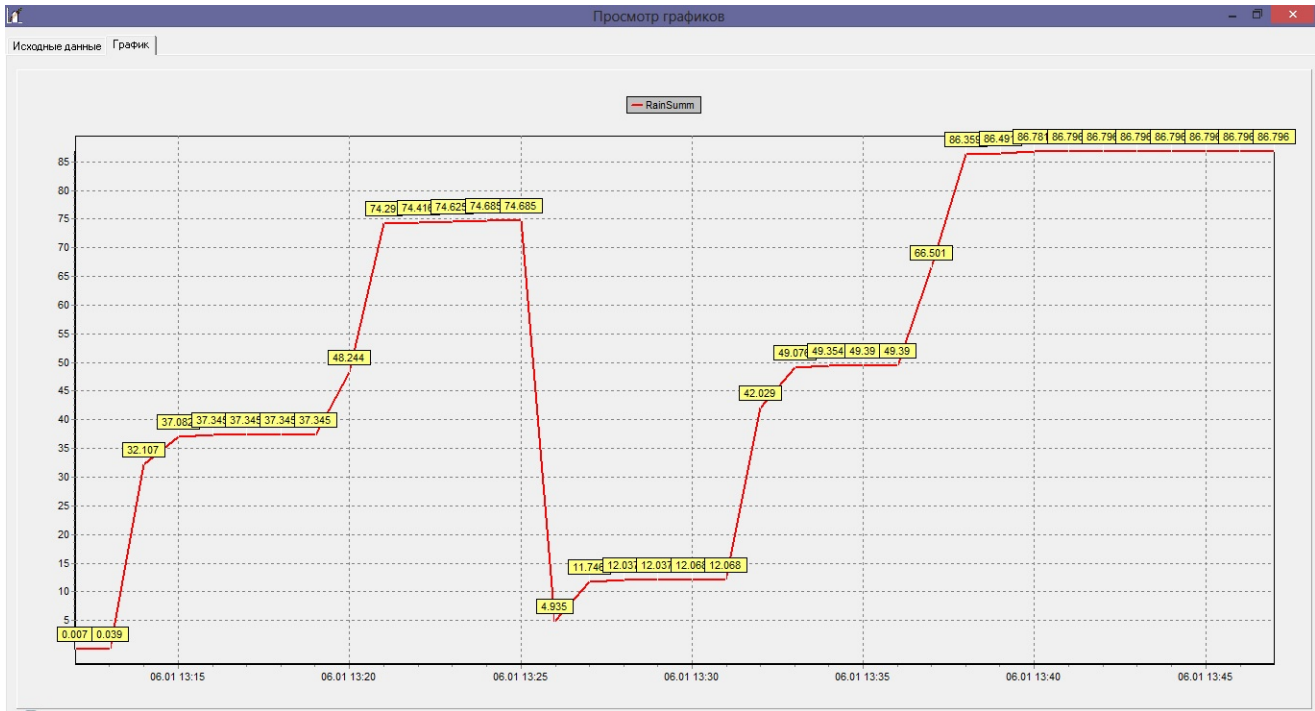
Добавить

Очистить

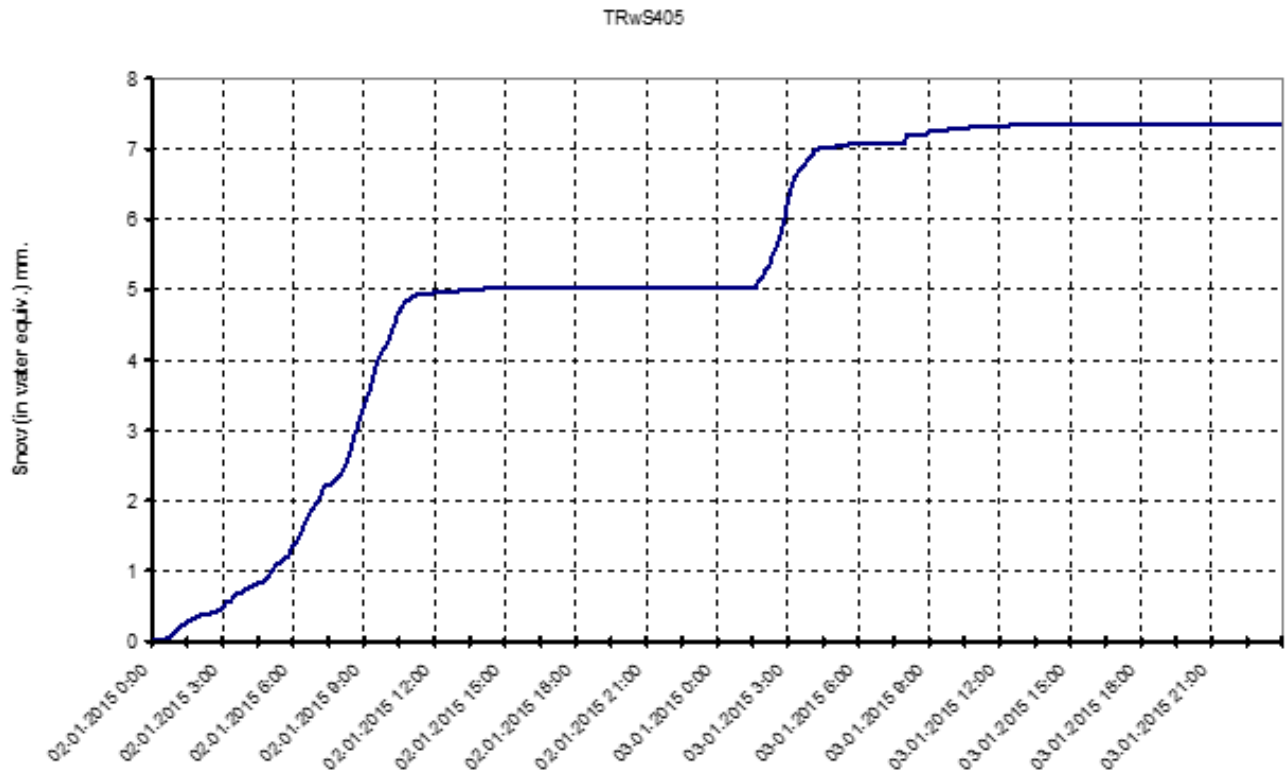
Сохранить

Выход

Field Calibration



48h Plot.



SECTION A4: CONFIRMATION OF EXPERIMENT CONFIGURATION

TEST 1: INSTRUMENT CALIBRATION AND CHECKS

The Site Manager will organize the check and calibration of each instrument included in the experiment (as part of the reference, or as an instrument under test). The check sheets and calibration results will be included in the designated areas of Sections A2 and A3.

- The calibration and check of the WG used as part of the reference will be conducted based on the guidelines adopted by the SPICE IOC.
- The calibration and check of the instruments under test will be conducted as specified by the manufacturer prior to the installation on the SPICE site, as well as following the installation in the field.

TEST 2: INSTRUMENT VALIDATION

After the field installation of each instrument (both those that are part of the reference and those that are instruments under test), at the minimum, a **continuous 48 hour data set** of the entire test setup will be stored and examined as an indication of instrument performance. The data sets for each instrument included in the intercomparison will be reviewed for data integrity and representativeness, against the predefined data format.

The evaluation of the instrument performance at this stage will be conducted using the 48 hour time series plots provided in Sections A2 and A3. The readiness state of each instrument will be reported in the Instrument Data Validation table below.

Any discrepancies will be investigated, addressed, and documented. Following the resolution of the discrepancies, the 48-hour end to end (e2e) test will be repeated. Notes, plots, logs, will be appended to the POP table of the reference/instrument under test, and the readiness state and date will be updated in the Instrument Data Validation table.

TEST 3: SITE-TO-ARCHIVE TRANSFER VALIDATION

Once the transfer of site data files to the SPICE Data Archive at NCAR has been initiated, compare the site data with those received at the SPICE Data Archive for a 24 hour period to ensure that no errors occurred during archival or transmission.

If any errors occur, log them and following the resolution of the discrepancies, repeat the 24-hour validation test.

When the Test 3 is passed mark the check box YES in the Instrument Data Validation table below (this

means that they have been also validated), with the starting date of the data transfer.

If Test 3 is not passed at the time of the Commissioning Report tick the checkbox NO and provide the expected date.

(Plots, datasets, errors logs, referred to Test 3 are **NOT** included in this document but archived by the site manager if further tests or analysis are required),

*IMPORTANT:
Test 2 and Test 3 may be conducted simultaneously, depending on the site configuration.*

Instrument Data Validation

| Instrument | Readiness (if Yes, indicate the date) | Data transfer to NCAR archive (Test 3) (If the answer is No report the expected date) | Comments |
|----------------------------------------------------|------------------------------------------|---------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| Geonor, OTT ABS “Nast” (1) ABS “Nast” (2) | Date: 27 November 2013 | Date: Data are available at FTP according to the Comments since 27 November 2013 | ftp://ftpuser@89.109.52.39 (Password: 327688) |
| | | | |

SECTION A5: SITE DOCUMENTATION CHECKLIST

A **Site Documentation Checklist** is provided below to track the inclusion of requisite documentation, data plots, and photos in sections A1 to A4.

Site Documentation Checklist

| | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| Site information and layout (Section A1) | X Included |
| Complete set of pictures documenting the overall site installation - views from N, E, S, W (Section A1) | X Included |
| Details of manual measurement procedure (Section A2) | X Included <input type="checkbox"/> Not Applicable |
| Instrument Metadata Reports for all instruments under test and all instruments used to provide ancillary measurements (Section A3) | X Included |
| Calibration results and check sheets for all instruments (Sections A2, A3) | X Included |
| Instrument data validation:, 48h time series plots (Sections A2, A3) | X Included |
| Instrument data validation table (Section A4) | X Included |
| 48h Instrument data validation: discrepancy reports (Section A4) | <input type="checkbox"/> Included X Not Applicable |
| Pictures of installations of all reference instruments, instruments under test, and instruments used to provide ancillary measurements (Sections A2, A3) | X Included |
| End-to-end data validation (Section A4; see Instrument data validation table). | X Full (all gauges) <input type="checkbox"/> Partial (some gauges) <input type="checkbox"/> No |
| SPICE archive end-to-end data validation: discrepancy reports (Section A4) | <input type="checkbox"/> Yes X No |

APPENDIX B: SPICE DATA LEVELS AND DATASETS

Details of the different levels of data and associated datasets for SPICE are included below. **The present document addresses only data up to and including Level 2a.** Data of higher levels, and the associated datasets, are tentatively defined here for completeness.

Data Levels:

Level 1 data: are those collected as the output of each individual instrument, which have been converted into geophysical measurements (e.g. weight, mass, intensity), generally with high temporal resolution, and before any significant data quality control has been applied. A **Level 1** dataset contains data from only one instrument at one site.

Level 2a data: are time-synchronized data resulting from the sampling, averaging or some other signal/data processing having been applied to **Level 1** data from an individual instrument in order to separate signal from noise. These data have not been quality controlled, and should be used only for monitoring an instrument's status. A **Level 2a** dataset contains data from only one instrument at one site.

Level 2b data: are time-synchronized **Level 2a** data after a basic data quality control procedure has been applied. Basic data quality flags for validity and quality have been added. Missing records have been created and filled with a missing data quality indicator. A **Level 2b** dataset contains data from only one instrument at one site.

Level 3 data: derived by combining and further processing all **Level 2b** datasets from a site. At this level, advanced and multiple instrument data quality techniques have been applied. A **Level 3** dataset contains data from all instruments at an individual site.

Level 4 data: derived after performing an intercomparison of the **Level 3** data from one or more sites, taking into account snow climatology, wind regimes, temperatures, etc., and where applicable, differences in these from one site to another.

Datasets:

SPICE Site Dataset: A dataset comprising all **Level 1, 2a, 2b and 3** datasets from that Intercomparison Site.

SPICE Intercomparison Dataset: this is the Level 4 dataset that combines the **Level 3** data from all SPICE intercomparison sites. The **Project Team** will develop the **SPICE Intercomparison Dataset** using the Level 3 datasets from each **Intercomparison Site**. It contains summary Level 3 data and intercomparison data for all instruments and all sites.

The SPICE Dataset: The total SPICE dataset including all **SPICE Site Datasets, Site Documentation and Instrument Documentation** for all participating sites and instruments, the **SPICE Intercomparison Dataset**, and all SPICE analysis and assessment documentation.

APPENDIX C: ACRONYMS AND ABBREVIATIONS

| | |
|-------|-------------------------------------------------------------------------------------------------------------------------|
| DFIR | Double-Fence Intercomparison Reference |
| e2e | End-to-end |
| ER | Evaluating Representative |
| IOC | International Organizing Committee |
| IR | Installation Representative |
| NCAR | National Center for Atmospheric Research (USA) |
| POP | Proof of Performance |
| QC | Quality control |
| R0 | Working field reference configuration 0: manual or automatic precipitation gauge in bush |
| R1 | Working field reference configuration 1: manual precipitation gauge in DFIR |
| R2 | Working field reference configuration 2: automatic weighing gauge in DFIR |
| R3 | Working field reference configuration 3: two automatic weighing gauges; one shielded (single-Altair), one unshielded |
| SPICE | Solid Precipitation Intercomparison Experiment |
| SWE | Snow water equivalent |
| WG | Weighing gauge |
| WMO | World Meteorological Organization |