Station: Ayvadzh / 亚洲

Station short name: AYVA
Latitude: 36.97912 ° (handheld GPS)
Longitude: 68.02351 ° (handheld GPS)
Elevation [m a.s.l.]: ca. 320 (Google Earth)

Country: Tajikistan
Oblast: Khatlonskaya
River basin: Kofirnikhon / Amudarya

Updated: 03.06.2012

Site Characteristics

Station location:

View to the station from NE

View to the station from SE

Station location and broader surroundings
Terrain features:

Please document the surroundings of the station with photographs from all cardinal directions.

Degree of urbanization in the surroundings:
rural area with village; in the immediate surroundings small houses with gardens and fruit trees, further south irrigated fields (maize, cereals)

Landscape type (e.g. mountains, coast):
broad flat river valley of Kofirnikhon river, near estuary

Direction of slope:
flat and level area at the valley bottom; to the SW small hill (ca. 5 m high, bank slope of a drainage channel)

Steep slopes, hills, hollows?
road at a distance of ca. 30...50 m to the E of the station

Impervious surface, pavements:
dlain at a distance of ca. 30...50 m to the E of the station

Open water surfaces:
drainage channel ca. 150 m to the W, across a small hill

Main surface cover in the surroundings:
ext except for the fields and gardens, almost bare sandy soil, barely vegetated with low desert plants

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View from the station to the North

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View from the station to the East
View from the station to the South

View from the station to the West
Station map:

*Please mark the sensors’ location, as well as the location and size of potential obstructions in the vicinity (buildings, fences, trees)*

Notes and remarks:

VSAT Height in m above ground: 2.51 m

Distance new precipitation sensor – old precipitation sensor: ~ 4.7 m

Height station control box: 1.32 m
Sensor exposure

Atmospheric pressure:

Sheltered within control cabinet? Yes
Protected from wind gusts? Yes

Solar radiation:

Sensor height above ground 1.85 m (center of the device)

Description of radiation horizon (average vertical angle of obstacles)

Temperature and humidity:

Sensor height in m above ground: 2.00 m (bottom edge of the radiation shield)
Artificial ventilation? Principally available, but not activated
Surface cover under screen: Almost bare soil, in spring some grass / low desert vegetation
Soil under screen: Fine sand, silt

Precipitation:

Gage rim height in m above ground: 1.84 m
Shield type: None
Alignment of main axis of tipping bucket: N-S (main wind directions from W)
Wind:

Anemometer height in m above ground: 10 m
Orientation of junction box: To the North
Free standing? Yes

If not free standing:

Building height, width, length in m

Vegetation: Almost bare soil, in spring some grass / low desert vegetation
Terrain roughness class: to N: 1.5 to E: 1
(in the immediate surrounding) to S: 2 to W: 1... 1.5
At a distance of ca. 70 m from the station to the N / E / S, roughness class ca. 3 (village, gardens with trees, small houses)

Soil temperature and soil water content:

Sensor depths in m below ground: 10, 20, 40, 60, 80, 100 cm below surface
Soil cover above the soil sensors: Almost bare soil, in spring (at the time of installation) some grass / low desert vegetation
Soil type:
Soil structure: Fine-middle sand, some fluvial gravel, silty
Level of water table in m below surface: ca. 8 m below surface (according to station operator, in the nearby groundwater well)

Please mark the soil sensors’ location below ground level

<table>
<thead>
<tr>
<th>Depth</th>
<th>Soil temp</th>
<th>VWC</th>
<th>Structure</th>
</tr>
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<tbody>
<tr>
<td>0.20</td>
<td></td>
<td></td>
<td>fS, u</td>
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<tr>
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<td>f-mS</td>
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<tr>
<td>0.60</td>
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<td></td>
<td>gS, gravel</td>
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<tr>
<td>1.00</td>
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<td></td>
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</tr>
<tr>
<td>1.20</td>
<td></td>
<td></td>
<td>gS, gravel</td>
</tr>
</tbody>
</table>
Open issues / limitations:

(1) Radiation sensor not fully operable; shield of LW up sensor broken / glued; LW up sensor delivering data only occasionally – calculated values lacking; device should be exchanged

(2) Wind sensor directed to the N not S – check if values have to be corrected

(3) check incoming power supply from solar panels – angle of panels might be too steep for efficient input

(4) temperature / humidity sensor needs recalibration in 2012

(5) cable length of precipitation sensor not sufficient for distant installation – might be too near to obstructions, though annual precipitation is low at this site

(6) temperature probe not fitting into the radiation shield – fixed with duct tape

(7) some plugs not heat-sealed