Station Exposure Description

Station: Merzbacher 1/ Мерцбахер 1

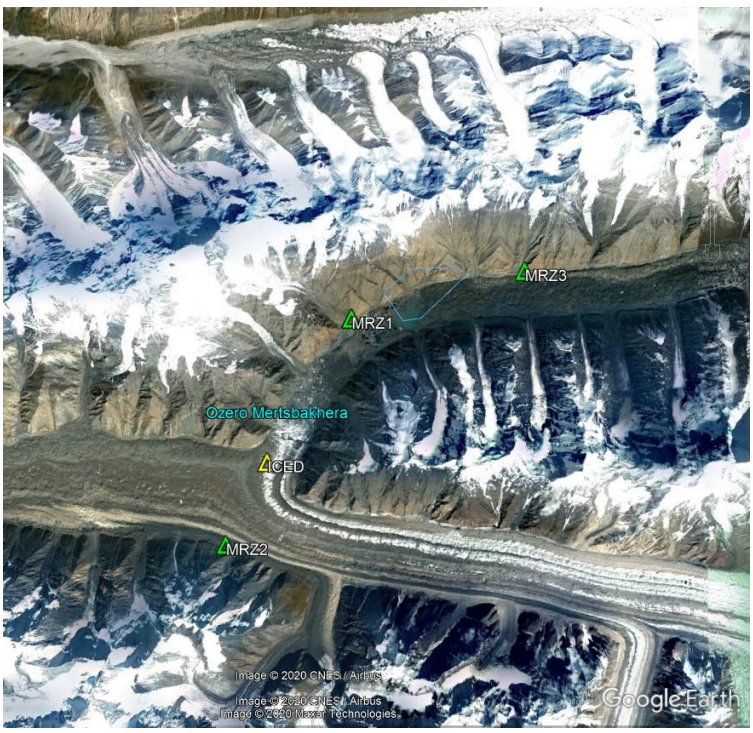
Station short name:	MRZ1	Operational since:	31.08.2009
Latitude:	42° 13' 28.20" N	Country:	Kyrgyz Republic
Longitude:	79° 51' 34.20" E	Oblast:	Issyk Kul
Elevation [m a.s.l.]:	3346.46m	River basin:	Tarim

Site Characteristics

Station location:

View to the station from NE

View to the station from SW



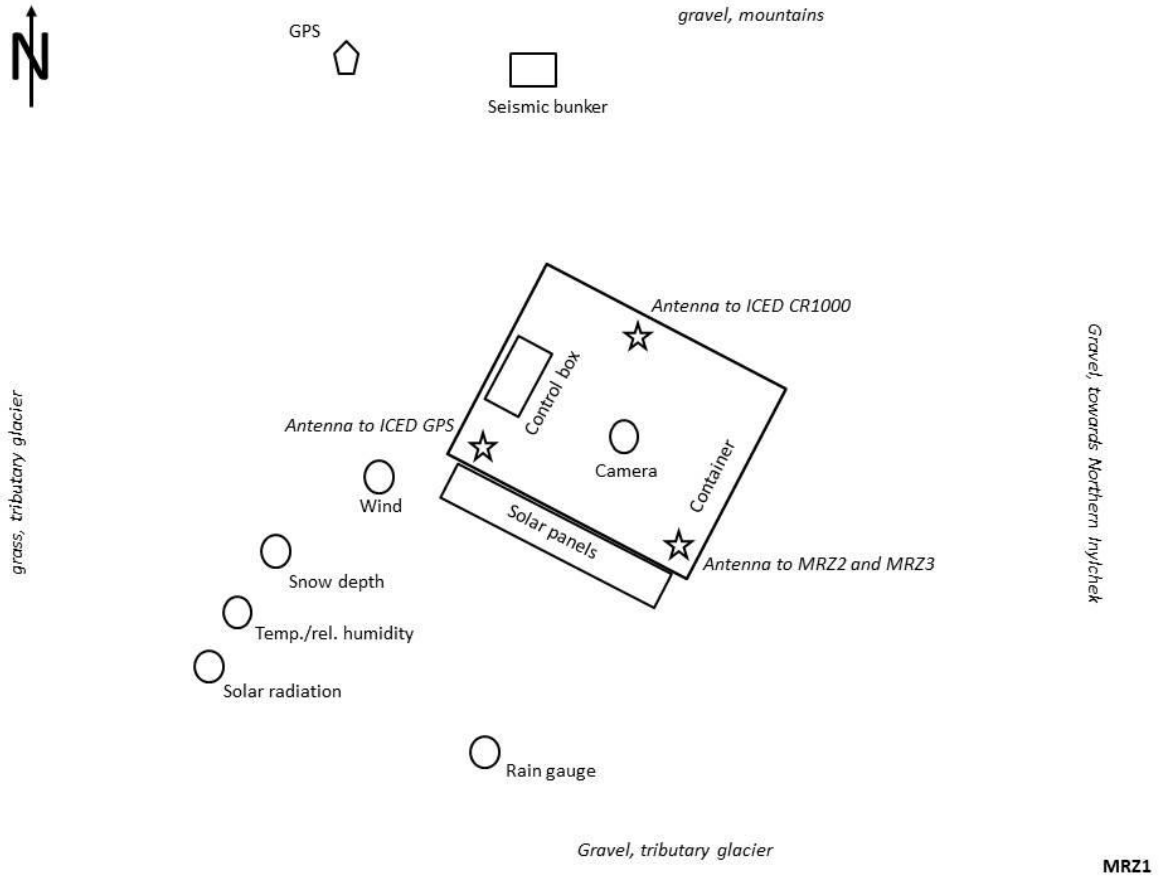
Station location and broader surroundings

Station Exposure Description

Terrain features:

Degree of urbanization in the surroundings:	No urbanization
Landscape type (e.g. mountains, coast):	Station is built nearby the Inylchek glacier, mountainous region
Direction of slope: Steep slopes, hills, hollows?	Ascending to the N, descending in all other directions
Impervious surface, pavements:	Not existent
Open water surfaces:	Lake Merzbacher during summer season
Main surface cover in the surroundings:	Gravel, sparse vegetation, glacier

Station map:



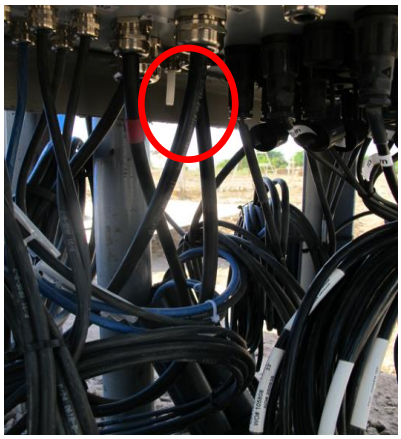
Notes and remarks:

Station Exposure Description

Sensor exposure

Atmospheric pressure:

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



Solar radiation:

Sensor height above ground:	~2.00 m

Temperature and humidity:

Sensor height in m above ground:	~2.00 m
Artificial ventilation?	no
Surface cover under screen:	Gravel, sparse vegetation
Soil under screen:	Gravel

Precipitation:

Gage rim height in m above ground:	~1.60 m
Shield type:	none
Alignment of main axis of tipping bucket:	N-S
Fixation:	No

Wind:

Anemometer height in m above ground:	10.00 m
Orientation of junction box	To South
Free standing?	Yes
If not free standing:	

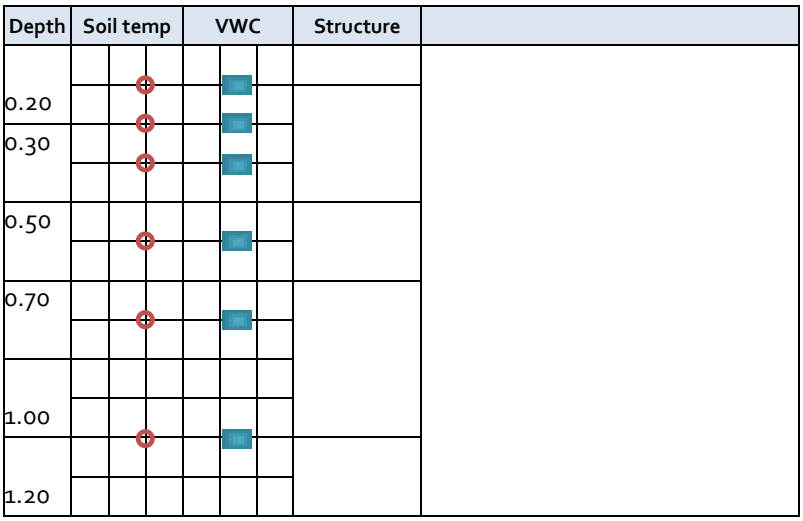
Station Exposure Description

Building height, width, length in m		
Vegetation:		
Terrain roughness class:	to N: 2	to E: 2
	to S: 2	to W2

Soil temperature and soil water content:

Sensor depths in m below ground:	Soil Temp: ; VWC:
Soil cover above the soil sensors:	Gravel, sparse vegetation
Soil type:	
Soil structure:	
Level of water table in m below surface:	Not measurable

Soil sensors locations below ground



GPS:

Distance above surface:	
Obstructions:	Installed on a slope. Ascending hill to N.

Snow depth and snow characteristics:

Ground cover below snow depth sensor:	Gravel, sparse vegetation
Height of USH-8 above ground:	~ 2.00 m

Station Exposure Description

GPS antenna

Snow depth sensor

List of installed sensors:

Measurement parameter	Manufacturer	Type
Temperature and humidity	Galltec-Mela Vaisala	KPK 1/5-ME HMP45
Air pressure	Setra	278
Wind	RM Young	05103-45
Precipitation	RM Young	52203
Solar radiation	Hukseflux	NR01
Soil moisture	Campbell Scientific	CS616
Soil temperature	Campbell Scientific	T107
Snow parameters	Sommer	USH8

Changes and damages:

Hardware

Date	Description of Change
03-07-2013	MRZ1: Temperature sensor KPK 1/5-ME removed,HMP-45 installed
21-07-2014	MRZ1: USH-8 connected
08-07-2015	MRZ1: HMP45 including all wires changed, USB backup stick inserted Damages: Rain sensor broken, dismantled, wind sensor broken
02-07-2016	MRZ1: Wind and rain sensor changed, temperature sensor broken
23-08-2019	MRZ1: PC broken and removed, HMP45 connected, solar panel of seismic station destroyed

Software

Date	Description of Change
12-11-2012	New datalogger CR1000-configuration
17-05-2013	New datalogger CR1000-configuration
03-07-2013	New datalogger CR1000-configuration (temperature sensor changed)
21-07-2014	New datalogger CR1000-network configuration
27-10-2014	New datalogger CR1000-configuration (change in temperature requesting)
08-07-2015	New datalogger CR1000-configuration (temperature sensor and network plan changed)
02-08-2017	New datalogger CR1000-configuration (transmission from ICED station changed)

Local Operator:

There is no local operator living directly at the station.

Open issues / limitations: