

## ***Interactive comment on “A new permanent multi-parameter monitoring network in Central Asian high mountains – from measurements to data bases” by T. Schöne et al.***

### **Anonymous Referee #1**

Received and published: 30 July 2012

The manuscript describes the development of a remote multi-parameter monitoring station including power considerations and communication through satellite to a processing facility. The focus is on hydrometeorological parameter retrieval, although the system is not limited to those and easily incorporated GNSS and seismic measurements. While the manuscript provides an excellent overview of the project, its instrumentation and software components, it may be difficult to repeat or establish similar Stations/Software without further details. This may be a fact of limited space in a single manuscript, but let us trust in the willingness of the authors to support requests by readers. A more detailed project report of documentation should be referenced if available.

C86

The manuscript is well structured and the use of tables and figures is supportive of the objective. While the use of references is acceptable, there could be more weight on similar systems from other disciplines using sensor networks. There are some indications that this is a unique and first time system, but there must be independent pre-decessors which should be included.

The manuscript is fundamentally important as it provides information about a wide range of potential obstacles in establishing multi-parameter stations, communication and control systems which can easily be ported to other disciplines.

Specific comments: page 303, line 22: why are more stations needed, any spatial coverage required to solve fundamental science questions? What area are the basins? Why at higher altitude?

page 303, line 28: Why do they need real-time access? Flooding forecast, weather models? Comment on this.

page 305, line 26: bad weather comes in different forms, what is it exactly which causes low power levels? More specifics.

page 306, section 2.2: Can you describe the motivation for the sampling intervals of 5/15 minutes? Give science and technical requirements.

page 307, line 29: What is the sampling rate for the pictures, what lenses and field of view is used? Could hyperspectral cameras be integrated? Later it says 2 frames per day.

page 309, line 3: Is Angermann 2010 the original reference for VSAT? If not, please give the original one.

page 312, line 4: What are current limits in number of parameters, sampling rate, etc, or overall data amount per day?

page 316, line 6: What are the costs involved for sensors, installation and VSAT band-

C87

width? Estimates would help the reader to assess implementation in other areas. If you cannot give those numbers, you cannot comment about high initial costs.

In general, I recommend that the sensors, sampling rates and locations are scientifically motivated a little better. In addition, a comparison, or at least referencing of similar systems should be attempted (besides the tsunami example). There are a few grammatical errors which are acceptable and do not hinder the reader.

---

Interactive comment on Geosci. Instrum. Method. Data Syst. Discuss., 2, 301, 2012.