

Interactive comment on “Automated observatory in Antarctica: real-time data transfer on constrained networks in practice” by Stephan Bracke et al.

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Review of "Automated observatory in Antarctica:..." by Bracke and other.

The manuscript presents a case study on setup and , particularly, near-real-time data transfer from remote locations. Different protocols are discussed for the latter. The manuscript deals with a frequently discussed issue in geomagnetism. I very much welcome this contribution. It is well structured and written. I strongly recommend acceptance of this manuscript. Nonetheless, I have a few points which I would like the authors to consider or comment on:

Specific aspects:

C1

1.) Discussions on data protocols: Most aspects have already been addressed by the other review and the reply. Just one comment on miniSeed: as you intend to broadcast DI data from your automatic Di-Flux as well, protocols which require evenly spaced time intervals as miniSeed are not favorable. In section 4, last sentence, you mention that you can use non-real time data transfer as well. It would be good to add this aspect earlier where you describe your system layout and its connections. Having a fall back is definitely worth to mention. Is this working automatically, i.e. running if a certain amount of data is missing?

2.) Description of the observatory: It would be great if you would add a better description of the observatory itself. You just show two photos of the dome and the station. A map or sketch indicating the positions of the instruments, electronics, data transfer connections, position of broker, would be very welcome.

3.) Please add references to all citations (e.g. page 2, II 32) and the descriptions of the protocols.

Other comments:

1.) Consistent use of abbreviations: I recommend use capitals for MQTT, GEMS, LEMI throughout the manuscript. In any case don't mix.

2.) Page 2, line 7: LEMI got adapted: It would be good if you could briefly explain what you mean by "adapted".

3.) Page 2, line 5: "First instrument We chose ..." -> "For measurements of the magnetic field vector we chose ..."

3.) page 8, line 4: "We have therefore hypothesis..." -> "Our hypothesis is ..."

4.) As your article is titled "data transfer ... in practice" you could provide some more info on the transmitted data itself. Some descriptive graphs on connection failures (only about 10 times each month), and delayed transmission would strengthen section 4.

C2

Best wishes, Roman

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C3