

Point to point reply (in red) to Koji Fujita by Azam et al.

I briefly comment on the effect of summer monsoon precipitation on glacier mass balance through changing surface albedo. Importance of phase of precipitation (snow or rain) during melting season has been pointed out since more than 10 years ago. Fujita and Ageta (2000) firstly demonstrated that the effect of summer-monsoon on mass balance of a Tibetan glacier by an energy mass balance model. Fujita (2008a, 2008b) evaluated an effect of precipitation seasonality on glacier mass balance using conceptual input variables. In particular, Fujita (2008a) conducted detailed analysis about changing components of energy budget associated with precipitation seasonality. I request for the authors of this manuscript to cite and discuss these previous studies appropriately.

According to the Reviewer's comments, we added the required references. One in Introduction:

"In the High Mountain Asia only a few studies have been carried out mainly in Tian Shan (Li et al., 2011), Qilian mountains (Sun et al., 2014), Tibetan Plateau (Fujita and Ageta, 2000; Yang et al., 2011; Mölg et al., 2012; Zhang et al., 2013) and the Nepalese Himalaya (Kayastha et al., 1999; Lejeune et al., 2013)."

And a second one in discussion:

"In central Tibetan Plateau, Fujita and Ageta, (2000); Fujita (2008a & 2008b) and Zhang et al. (2013) indicated that the glacier surface mass balance was closely related to the summer-monsoon precipitation seasonality and phase (snow versus rain)."

Although it was clearly addressed that Chhota Shigri Glacier is a winter-accumulation type glacier (P2877), I suppose that the frequent use of "summer monsoon" would mislead readers as if this glacier was significantly affected by the Indian Summer Monsoon.

The term "Summer-monsoon" is of course often used in the manuscript to describe the seasonality of meteorological variables, or of energy fluxes. As underlined by Koji Fujita, it is clearly specified in the text that Chhota Shigri Glacier is a winter-accumulation type glacier (receiving 79% of its annual precipitation in winter in 2012/13 – section 2.4.2), but its annual melting still largely depends on sporadic summer snowfalls (section 5.1). It is therefore true that this glacier is significantly affected by snowfalls occurring during the Indian summer monsoon. We do believe that this is clearly explained in the manuscript. To avoid any confusion, in the revised manuscript, we repeated in section 5.1 that Chhota Shigri Glacier is a winter accumulation type glacier:

"Even though Chhota Shigri Glacier is a winter-accumulation type glacier, this analysis highlights the role of, snowfall events during the summer-monsoon season those play a key role on albedo, and, in turn, on melting."