HESS Manuscript Review for:

<u>Evaluation of various daily precipitation products for large-scale hydro-climatic applications over Canada</u>

The main areas for revision in the updated manuscript are run on sentences/comma errors, overwhelming supplemental information and results presentation. The methodology has been presented clearly and overall the section is clear to follow. Furthermore, the discussion is also presented well and highlights the important information derived from the results.

Points for revision:

• The sentence at the very beginning of the paper is run on. The reader would have an easier time processing the information if it was divided into two parts.

"This study inter-compares several gridded precipitation products and quantifies the spatial and temporal variability of the errors (relative to station observations) over 15 terrestrial ecozones in Canada for different seasons over the period 1979 to 2012 at a 0.5° and daily spatiotemporal resolution"

• A comma is missing after *precipitation*.

"The availability of accurate data, especially precipitation is essential for understanding the climate system and hydrological processes since it is a vital element of the water and energy cycles and a key forcing variable for driving hydrological models"

• The comma is not needed after part

"It is interesting to note that for the most part, there is a higher percentage of reliability in short-term period compared to long-term period."

- The entire paper would benefit from a thorough review to correct these types grammatical errors as sentence structure can drastically alter the meaning of a statement.
- The section on precipitation measurements and their limitations is a very lengthy amount of background information that doesn't necessarily contribute to the goal of the paper which is an inter-comparison of precipitation products.
- Another example where information can be removed is where the requirements to choose the 7
 products are stated clearly, but then datasets which do not meet the requirements are
 mentioned. It is obvious for a reader to understand that if something did not meet the
 requirements it would not be included.

"Note that other commonly used datasets including the monthly Canadian Gridded temperature and precipitation (CANGRD) (Zhang et al., 2000), the coarser resolution Japan Meteorological Agency 55-year Reanalysis (JRA-55) (Onogi et al., 2007;Kobayashi et al., 2015), and the Modern-Era Retrospective Analysis for Research and Applications (MERRA) (Rienecker et al., 2011) products were excluded as they do not meet criteria (2) above."

• In the following paragraph only the information pertaining to this study and the dataset used needs to be included. It can be reduced to one line.

"1) 1948 to 2008 at 1.0°, 0.5°, and 0.25° at 3-hourly, daily, and monthly time steps and 2) 1901-2012 experimental version at 1.0° and 0.5° at 3-hourly, daily, and monthly time steps (used in this study). Studies employing Princeton to examine different hydrological aspects have been carried out over different parts of Canada. For instance, Kang et al. (2014) examined the changing contribution of snow to runoff generation in the Fraser River Basin while Su et al. (2013) investigated the relationships between spring snow and warm-season precipitation in central Canada. In addition, Wang et al. (2013) and Wang et al. (2014) used this dataset to characterize the spatial and seasonal variations of the surface water budget at Canada national scale"

• The figures are crowded and do not present the information in a manner which is useful to the reader (even on a presentation screen the key information was impossible to decipher). The results section is also lengthy and important values are lost amongst the words. As each of the performance measures results in a value it would make better sense to present the results in a tabular format. This would alleviate the issue of information being lost and help the reader gain a clear picture of the performance as they could on their own compare values.