**Other Comment:**

Page 14, line 15: “*f* number” -> “f-number”

Page 20, line 26: “The spectra display the expected…” -> “The spectra displays the expected…”

Table 1: “*F* number” -> “F-number”

**TS1 Please make sure all matrices are bold and all vectors bold italic throughout the paper.**

Page 21, line 22: “*Iv (****z****,λ) -> “****I****v (****z****,λ)”*

Page 21, line 22: “*Iv,*rayleigh *(****z****,λ) -> “****I****v,*rayleigh *(****z****,λ)”*

Page 21, line 23: “*Iv (****z****,λ)” -> “****I****v (****z****,λ)”*

Page 22, line 11: “***W****i,j”“-> “Wi,j”*

Page 22, line 13: “***W****i,j”* is the weighting matrix*”-> “Wi,j* is an element of the weighting matrix*”*

**TS2 Please provide year.**

Page 20, line 1: “(B. Solheim, private communication, )” -> “(B. Solheim, private communication, 2014)”

**TS3 Please check numbering of equations throughout the text.**

Page 22, line 3: “Eq. (8)” -> “Eq. (7)”

**TS4 Please provide page range or article number + DOI.**

Article Number: 7692, DOI: 10.1038/ncomms8692

**TS5 Please provide page range or article number + DOI.**

Issue: 11, Pages: 357-359, DOI: 10.1088/0950-7671/26/11/302

**TS6 Please differ throughout text.**

Page 5, line 19: “Bourassa et al., 2012” -> “Bourassa et al., 2012c”

Page 21, line 21: “Bourassa et al. (2012)” -> “Bourassa et al. (2012b)”

**TS7 Please provide page range or article number + DOI.**

Issue: D5, Article Number: 4167, DOI: 10.1029/2002JD002514

**TS8 Please update if possible.**

“Dueck, S., Bourassa, A. E., and Degenstein, D. A.: SASKTRAN-HR Polarization Module, in preparation, 2015” -> Dueck, S. R., Bourassa, A. E., Degenstein, D. A.: Polarization in the SASKTRAN radiative transfer framework, in preparations, 2015

**TS9 Please provide place of publication.**

New York, USA

**TS10 Please provide page range or article number + DOI.**

Article Number: D12207 DOI: 10.1029/2006JD007714

**TS11 Please check DOI/url.**

DOI: 10.1175/1520-0469(1961)018<0081:SA>2.0.CO;2

**TS12 Please provide page range or DOI.**

DOI: 10.1088/1748-9326/7/3/034013

**TS13 Please provide place of publication and publisher.**

Place of publication: Cambridge, UK and New York, USA, Publisher: Cambridge University Press

**TS14 Please provide page range or article number + DOI.**

Issue: 12, Article Number: 1631, DOI: 10.1029/2003GL017317

**TS15 Please provide page range or article number + DOI.**

Article Number: L07804, DOI: 10.1029/2010GL046614

**TS16 Please check DOI/url.**

DOI: 10.1088/1464-4258/9/4/006 (Correct in text)

**TS17 Please provide page range or article number + DOI.**

Article Number: L19803, DOI: 10.1029/2007GL030135

**TS18 Please provide place of publication.**

Place of Publication: New York, USA

**TS19 AMT update has been inserted.**

Noted