1. In addition to the changes requested by the two reviewers, I would request a line or two be added somewhere to acknowledge that the stability of the RR temperatures can also depend on the laser stability. If the laser line drifts around by a few picometres due to temperature changes in the laser, then you could see a change in the retrieved RR temperatures up to a Kelvin. The optimal solution on the transmitter side is external seeding and a laser pulse spectrometer to measure the offset between the seed laser and the output of the power laser.

   Thank you for your comment. Our laser is unseeded, with a linewidth of 1 cm^{-1} (30 GHz) as specified by Litron (communication on 25 April 2018). The temperature dependency of the laser line center is 0.004 nm/°C at 1064 nm, which translates to approximately 1.3 pm/°C at 355 nm (around 3 GHz/°C or 0.1 cm^{-1}/°C). Considering variations of ±3°C in the cooling system, this would result in a displacement of the laser frequency by ∼0.3 cm^{-1}. However, the PRR polychromator linewidth is estimated to be 20-25 cm^{-1} (600-750 GHz), based on the RALMO user manual (EPFL) and Martucci et al. (2021). This corresponds to the spectral width of the Stokes and Anti-Stokes spectra diffracted by the grating filter onto each optic fiber in the polychromator. Given that the laser is stabilized within a temperature range of ±2°C by the water-cooling system, even a change of 3°C would only cause a relative displacement of 1/80th of the PRR polychromator spatial bandwidth. Thus, it would not affect the polychromator's ability to select the central main Stokes and Anti-Stokes lines (Tables 1-2, Martucci et al. 2021).