Radiative transfer in the region with solar and infrared spectra overlap

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Highlights

- Three schemes which include a newly proposed one are discussed and compared to deal with the solar energy in infrared spectra.
- The newly proposed scheme calculates the solar energy in infrared spectra in different infrared bands through adding method.
- The newly proposed scheme always yields smaller errors in heating rate and fluxes whether for the clear sky or cloudy sky comparing with the other two schemes.