TM5-MP - Task #439

Treatment of ice clouds in photolysis

01/28/2016 12:30 PM - Twan van Noije

Status:	New	**Start date:**	01/28/2016
Priority:	Low	**Due date:**	
Assignee:		**% Done:**	0%
Category:		**Estimated time:**	0.00 hour
Target version:		**Spent time:**	0.00 hour

Description

In the photolysis routine, the extinction for ice particles is calculated based on Eq. (3.9a) from Fu (J. Climate, 1996), using coefficients valid for wavelengths between 330 and 360 nm. The corresponding formulas for the single-scattering albedo and the asymmetry factor are not used in the TM5 code. These are set to the values obtained for liquid water clouds, which are calculated based on Slingo (JAS, 1989) for wavelengths 250-690 nm. Moreover, the effect of the ice clouds on photolysis rates is not included if the liquid water content is close to zero.

Just wondering, why don't we calculate the ice optical properties and do a proper averaging?

History

#1 - 01/28/2016 12:31 PM - Twan van Noije

- Tracker changed from Bug to Task

#2 - 01/28/2016 12:39 PM - Twan van Noije

- Subject changed from Treatment of cirrus in photolysis to Treatment of ice clouds in photolysis

#3 - 07/03/2018 12:35 PM - Philippe Le Sager

- Project changed from TM5-ZOOM to TM5-MP

- Category deleted (chemistry)