

	<u>Errors</u>	<u>Limitations</u>	<u>Diagnostics Affected</u>	<u>If participating in CMIP6/CFMIP3?</u>
v1.4.0	Error in treatment of mixed-phase clouds in MODIS simulator.	Unable to produce diagnostics in CFMIP3 data request: <i>Optical_Thickness_vs_ReffICE*</i> <i>Optical_Thickness_vs_ReffLIQ*</i>	<i>MODIS simulator (field within type cosp_modis):</i> <i>Cloud_Fraction_Total_Mean</i> <i>Cloud_Fraction_Water_Mean</i> <i>Cloud_Fraction_Ice_Mean</i> <i>Cloud_Fraction_High_Mean</i> <i>Cloud_Fraction_Mid_Mean</i> <i>Cloud_Fraction_Low_Mean</i> <i>Optical_Thickness_Total_Mean</i> <i>Optical_Thickness_Water_Mean</i> <i>Optical_Thickness_Ice_Mean</i> <i>Optical_Thickness_Total_LogMean</i> <i>Optical_Thickness_Water_LogMean</i> <i>Optical_Thickness_Ice_LogMean</i> <i>Cloud_Particle_Size_Water_Mean</i> <i>Cloud_Particle_Size_Ice_Mean</i> <i>Cloud_Top_Pressure_Total_Mean</i> <i>Liquid_Water_Path_Mean</i> <i>Ice_Water_Path_Mean</i> <i>Optical_Thickness_vs_Cloud_Top_Pressure*</i> <i>NOTE: Most impacts are expected to affect only column fields in which mixed-phase clouds are visible from the top of the atmosphere.</i>	Option 1: Submit to CMIP6/CFMIP3 with affected diagnostics omitted. Option 2: Update to COSPv1.4.2 The following patch (~500 lines of code) can be applied directly to your COSPv1.4 source code to update it to v1.4.2. https://github.com/CFMIP/COSPv1/blob/master/patch.v1.4.0 to v1.4.2.tar Highlighted changes can be seen here: For v1.4.0 -> v1.4.1: https://github.com/CFMIP/COSPv1/commit/88a3582f5beb7cbcf0acd39bcb4d7be1833d83ee For v1.4.1 -> v1.4.2: https://github.com/CFMIP/COSPv1/commit/d52a21240883b29fb309e9ddb77e4f661dc047d2
v1.4.1	<ul style="list-style-type: none"> • Error in treatment of mixed-phase clouds in MODIS simulator. • There are 2 issues with the new MODIS diagnostics: 1) reported as fractional values, should be in percent and 2) require initialization. 		<i>MODIS simulator (fields within type cosp_modis):</i> <i>Cloud_Fraction_Total_Mean</i> <i>Cloud_Fraction_Water_Mean</i> <i>Cloud_Fraction_Ice_Mean</i> <i>Cloud_Fraction_High_Mean</i> <i>Cloud_Fraction_Mid_Mean</i> <i>Cloud_Fraction_Low_Mean</i> <i>Optical_Thickness_Total_Mean</i> <i>Optical_Thickness_Water_Mean</i> <i>Optical_Thickness_Ice_Mean</i> <i>Optical_Thickness_Total_LogMean</i> <i>Optical_Thickness_Water_LogMean</i> <i>Optical_Thickness_Ice_LogMean</i> <i>Cloud_Particle_Size_Water_Mean</i> <i>Cloud_Particle_Size_Ice_Mean</i> <i>Cloud_Top_Pressure_Total_Mean</i> <i>Liquid_Water_Path_Mean</i> <i>Ice_Water_Path_Mean</i> <i>Optical_Thickness_vs_Cloud_Top_Pressure*</i> <i>Optical_Thickness_vs_ReffICE*</i> <i>Optical_Thickness_vs_ReffLIQ*</i>	Option 1: Submit to CMIP6/CFMIP3 with affected diagnostics omitted. Option 2: Update to COSPv1.4.2 The following patch (18 lines of code) can be applied directly to your COSPv1.4.1 source code to update it to v1.4.2. https://github.com/CFMIP/COSPv1/blob/master/patch.v1.4.1 to v1.4.2.tar Highlighted changes can be seen here: https://github.com/CFMIP/COSPv1/commit/d52a21240883b29fb309e9ddb77e4f661dc047d2

v1.4.2	None known			No action needed
v2.0.0	Error in treatment of mixed-phase clouds in MODIS simulator.		<p><i>MODIS simulator (fields within type cosp_outputs):</i></p> <p><i>Cloud_Fraction_Total_Mean</i> <i>Cloud_Fraction_Water_Mean</i> <i>Cloud_Fraction_Ice_Mean</i> <i>Cloud_Fraction_High_Mean</i> <i>Cloud_Fraction_Mid_Mean</i> <i>Cloud_Fraction_Low_Mean</i> <i>Optical_Thickness_Total_Mean</i> <i>Optical_Thickness_Water_Mean</i> <i>Optical_Thickness_Ice_Mean</i> <i>Optical_Thickness_Total_LogMean</i> <i>Optical_Thickness_Water_LogMean</i> <i>Optical_Thickness_Ice_LogMean</i> <i>Cloud_Particle_Size_Water_Mean</i> <i>Cloud_Particle_Size_Ice_Mean</i> <i>Cloud_Top_Pressure_Total_Mean</i> <i>Liquid_Water_Path_Mean</i> <i>Ice_Water_Path_Mean</i> <i>Optical_Thickness_vs_Cloud_Top_Pressure*</i> <i>Optical_Thickness_vs_ReffICE*</i> <i>Optical_Thickness_vs_ReffLIQ*</i></p>	<p>Option 1: Submit to CMIP6/CFMIP3 with affected diagnostics omitted.</p> <p>Option 2: Update to COSPv2.0.1. This can be done by updating your local COSP repository with the master (e.g. git pull origin master). This change only impacts a few lines of code.</p> <p>Highlighted changes can be seen here: https://github.com/CFMIP/COSPv2.0/commit/74cde20c63ad9a77f69ee329bb25cf3bfb0ba0e</p>
v2.0.1				No action needed

**Three-dimensional diagnostic, all other diagnostics are column fields and have one dimension.*