

GEOS-Chem default emission configuration				
Version 12.6.0, 21 Oct 2019				
NO				
Anthropogenic	CEDS	Global	1950-2014	monthly
Anthropogenic	APEI	Canada	1989-2014	annual
Anthropogenic	NEI2011	USA	2006-2013	monthly
Anthropogenic	MIX	Asia	2008-2010	monthly
Anthropogenic	DICE	Africa	2013	annual
Ship^1	CEDS	Global	1950-2014	monthly
Aircraft	AEIC	Global	2005	monthly
Biomass burning	GFED4	Global	1997-2013	monthly
Lightning	Murray et al	Global	online	online
OFFLINE_SOILNOx	Vinken et al	Global	2014-present	hourly
^1 via PARANOx				
NO2				
Anthropogenic	NEI2011	USA	2006-2013	monthly
Anthropogenic	DICE	Africa	2013	annual
Ship^1	CEDS	Global	1950-2014	monthly
^1 via PARANOx				
HNO3 / O3				
Ship^1	CEDS	Global	1950-2014	monthly
^1 via PARANOx				
CO				
Anthropogenic	CEDS	Global	1950-2014	monthly
Anthropogenic	APEI	Canada	1989-2014	annual
Anthropogenic	NEI2011	USA	2006-2013	monthly
Anthropogenic	MIX	Asia	2008-2010	monthly
Anthropogenic	DICE	Africa	2013	annual
Ship	CEDS	Global	1950-2014	monthly
Aircraft	AEIC	Global	2005	monthly
Biomass burning	GFED4	Global	1997-2013	monthly
Biogenic	OFFLINE_BIOVOC	Global	2014-present	hourly
SO2				

Anthropogenic	CEDS	Global	1950-2014	monthly
Anthropogenic	APEI	Canada	1989-2014	annual
Anthropogenic	NEI2011	USA	2006-2013	monthly
Anthropogenic	MIX	Asia	2008-2010	monthly
Anthropogenic	DICE	Africa	2013	annual
Ship	CEDS	Global	1950-2014	monthly
Aircraft	AEIC	Global	2005	monthly
Biomass burning	GFED4	Global	1997-2013	monthly
Volcano	Aerocom	Global	1978-2019	daily
SO4				
Anthropogenic	CEDS	Global	1950-2014	monthly
Anthropogenic	APEI	Canada	1989-2014	annual
Anthropogenic	NEI2011	USA	2006-2013	monthly
Anthropogenic	MIX	Asia	2008-2010	monthly
Anthropogenic	DICE	Africa	2013	annual
Aircraft	AEIC	Global	2005	monthly
Ship	CEDS	Global	1950-2014	monthly
NH3				
Anthropogenic	CEDS	Global	1950-2014	monthly
Anthropogenic	APEI	Canada	1989-2014	annual
Anthropogenic	NEI2011	USA	2006-2013	monthly
Anthropogenic	MIX	Asia	2008-2010	monthly
Anthropogenic	DICE	Africa	2013	annual
Natural	GEIA	Global	1990	monthly
Seabirds	Croft et al	Global	1990	monthly
Biomass burning	GFED4	Global	1997-2013	monthly
Ship	CEDS	Global	1950-2014	monthly
BCPI/OCPI				
Anthropogenic	CEDS	Global	1950-2014	monthly
Anthropogenic	APEI	Canada	1989-2014	annual
Anthropogenic	NEI2011	USA	2006-2013	monthly
Anthropogenic	DICE	Africa	2013	annual
Biomass burning	GFED4	Global	1997-2013	monthly

Aircraft	AEIC	Global	2005	monthly
Ship	CEDS	Global	1950-2014	monthly
BCPO/OCPO				
Anthropogenic	CEDS	Global	1950-2014	monthly
Anthropogenic	APEI	Canada	1989-2014	annual
Anthropogenic	NEI2011	USA	2006-2013	monthly
Anthropogenic	DICE	Africa	2013	annual
Biomass burning	GFED4	Global	1997-2013	monthly
Ship	CEDS	Global	1950-2014	monthly
EOH				
Anthropogenic	CEDS	Global	1950-2014	monthly
Anthropogenic	NEI2011	USA	2006-2013	monthly
Anthropogenic	MIX	Asia	2008-2010	monthly
Anthropogenic	DICE	Africa	2013	annual
Decaying plants	Millet et al. 2010	Global	climatology	monthly
Biomass burning	GFED4	Global	1997-2013	monthly
Biogenic	OFFLINE_BIOVOC	Global	2014-present	hourly
Ship	CEDS	Global	1950-2014	monthly
C2H6				
Anthropogenic	Tzompa-Sosa et al. 2017	Global	2010	monthly
Aircraft	AEIC	Global	2005	monthly
Biomass burning	GFED4	Global	1997-2013	monthly
Ship	CEDS	Global	1950-2014	monthly
C3H8				
Anthropogenic	Xiao et al 2008	Global	1950-2014	monthly
Biofuel	Logan and Yevich	Global	1985	monthly
Anthropogenic	NEI2011	USA	2006-2013	monthly
Anthropogenic	MIX	Asia	2008-2010	monthly
Anthropogenic	DICE	Africa	2013	annual
Aircraft	AEIC	Global	2005	monthly
Biomass burning	GFED4	Global	1997-2013	monthly
Ship	CEDS	Global	1950-2014	monthly

C2H4				
Anthropogenic	CEDS	Global	1950-2014	monthly
Anthropogenic	NEI2011	USA	2006-2013	monthly
Anthropogenic	DICE	Africa	2013	annual
Biomass burning	GFED4	Global	1997-2013	monthly
Biogenic	OFFLINE_BIOVOC	Global	2014-present	hourly
Ship	CEDS	Global	1950-2014	monthly
C2H2				
Anthropogenic	CEDS	Global	1950-2014	monthly
Anthropogenic	DICE	Africa	2013	annual
Aircraft	AEIC	Global	2005	monthly
Ship	CEDS	Global	1950-2014	monthly
PRPE				
Anthropogenic	CEDS	Global	1950-2014	monthly
Anthropogenic	NEI2011	USA	2006-2013	monthly
Anthropogenic	MIX	Asia	2008-2010	monthly
Anthropogenic	DICE	Africa	2013	annual
Aircraft	AEIC	Global	2005	monthly
Biomass burning	GFED4	Global	1997-2013	monthly
Biogenic	OFFLINE_BIOVOC	Global	2014-present	hourly
Ship	CEDS	Global	1950-2014	monthly
BENZ/TOLU/XYLE				
Anthropogenic	CEDS	Global	1950-2014	monthly
Anthropogenic	NEI2011	USA	2006-2013	monthly
Anthropogenic	DICE	Africa	2013	annual
Biomass burning	GFED4	Global	1997-2013	monthly
CH2O				
Anthropogenic	CEDS	Global	1950-2014	monthly
Anthropogenic	NEI2011	USA	2006-2013	monthly
Anthropogenic	MIX	Asia	2008-2010	monthly
Anthropogenic	DICE	Africa	2013	annual
Aircraft	AEIC	Global	2005	monthly
Biomass burning	GFED4	Global	1997-2013	monthly

Ship	CEDS	Global	1950-2014	monthly
ALD2				
Anthropogenic	CEDS	Global	1950-2014	monthly
Anthropogenic	NEI2011	USA	2006-2013	monthly
Anthropogenic	MIX	Asia	2008-2010	monthly
Anthropogenic	DICE	Africa	2013	annual
Aircraft	AEIC	Global	2005	monthly
Decaying plants	Millet et al. 2010	Global	climatology	monthly
Biomass burning	GFED4	Global	1997-2013	monthly
Biogenic	OFFLINE_BIOVOC	Global	2014-present	hourly
Ocean	Johnson et al	Global	online	online
Ship	CEDS	Global	1950-2014	monthly
MEK				
Anthropogenic	CEDS	Global	1950-2014	monthly
Anthropogenic	EMEP	Europe	1990-2012	annual
Anthropogenic	NEI2011	USA	2006-2013	monthly
Anthropogenic	MIX	Asia	2008-2010	monthly
Anthropogenic	DICE	Africa	2013	annual
Aircraft	AEIC	Global	2005	monthly
Biomass burning	GFED4	Global	1997-2013	monthly
Ship	CEDS	Global	1950-2014	monthly
HCOOH				
Anthropogenic	CEDS	Global	1950-2014	monthly
Anthropogenic	DICE	Africa	2013	annual
Ship	CEDS	Global	1950-2014	monthly
ALK4				
Anthropogenic	CEDS	Global	1950-2014	monthly
Anthropogenic	NEI2011	USA	2006-2013	monthly
Anthropogenic	MIX	Asia	2008-2010	monthly
Anthropogenic	DICE	Africa	2013	annual
Aircraft	AEIC	Global	2005	monthly
Biomass burning	GFED4	Global	1997-2013	monthly
Ship	CEDS	Global	1950-2014	monthly

ACET				
Anthropogenic	NEI2011	USA	2006-2013	monthly
Anthropogenic	MIX	Asia	2008-2010	monthly
Anthropogenic	DICE	Africa	2013	annual
Aircraft	AEIC	Global	2005	monthly
Biomass burning	GFED4	Global	1997-2013	monthly
Biogenic	OFFLINE_BIOVOC	Global	2014-present	hourly
Ocean	Johnson et al	Global	online	online
SOAP				
Anthropogenic	CEDS	Global	1950-2013	monthly
Anthropogenic	APEI	Canada	1989-2014	annual
Anthropogenic	NEI2011	USA	2006-2013	monthly
Anthropogenic	MIX	Asia	2008-2010	monthly
Anthropogenic	DICE	Africa	2013	annual
Ship	CEDS	Global	1950-2014	monthly
Aircraft	AEIC	Global	2005	monthly
Biomass burning	GFED4	Global	1997-2013	monthly
Biogenic	OFFLINE_BIOVOC	Global	2014-present	hourly
SOAS / MTPO / LIMO / SESQ				
Biogenic	OFFLINE_BIOVOC	Global	2014-present	hourly
MTPA				
Biomass burning	GFED4	Global	1997-2013	monthly
Biogenic	OFFLINE_BIOVOC	Global	2014-present	hourly
POG1 / POG2				
Anthropogenic	APEI	Canada	1989-2014	annual
Biomass burning	GFED4	Global	1997-2013	monthly
NAP				
Anthropogenic	EDGAR	Global	1985	annual
Biomass burning	GFED4	Global	1997-2013	monthly
HAC / GLYC				

Anthropogenic	DICE	Africa	2013	annual
Trash	Wiedinmyer et al.	Global	2008	annual
pFe				
Anthropogenic	CEDS	Global	1950-2014	monthly
Anthropogenic	APEI	Canada	1989-2014	annual
Anthropogenic	NEI2011	USA	2006-2013	monthly
Anthropogenic	MIX	Asia	2008-2010	monthly
Anthropogenic	DICE	Africa	2013	annual
Ship	CEDS	Global	1950-2014	monthly
MOH				
Anthropogenic	NEI2011	USA	2006-2013	monthly
Anthropogenic	DICE	Africa	2013	annual
HNO2				
Anthropogenic	NEI2011	USA	2006-2013	monthly
RCHO / MACR				
Anthropogenic	NEI2011	USA	2006-2013	monthly
Anthropogenic	DICE	Africa	2013	annual
Aircraft	AEIC	Global	2005	monthly
DMS				
Ocean	Johnson et al	Global	online	online
DST1 / DST2 / DST3 / DST4				
Dust	OFFLINE_DUST	Global	2014-present	hourly
Anthro PM2.5 ¹	AFCID (S. Philip et al)	Global	2015	monthly
SALA / SALC / Br2 / BrSALA / BrSALC				
Sea salt	Jaegle et al, Sherwen et	Global	online	online
HOI / I2				
Oceanic	Carpenter et al	Global	online	online
CHBr3 / CH2Br2				

Oceanic	Qing Liang	Global	2000	annual
CH3I / CH2I2 / CH2ICl / CH2IBr				
Oceanic	Carlos Ordonez	Global	2000	monthly