

NorESM2 – CMIP6 – 2x2 simulations

Oslo, 14 August 2019

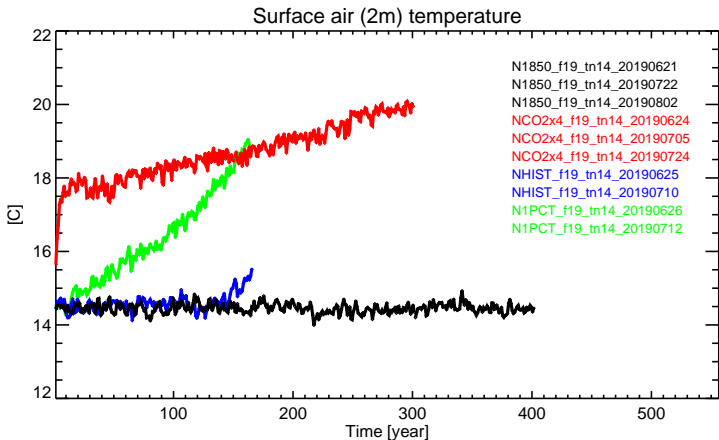
- DECK simulations
- DAMIP historical
- AerChemMIP historical
- AerChemMIP fixed-SST historical
- 30-year fixed-SST

Experiments

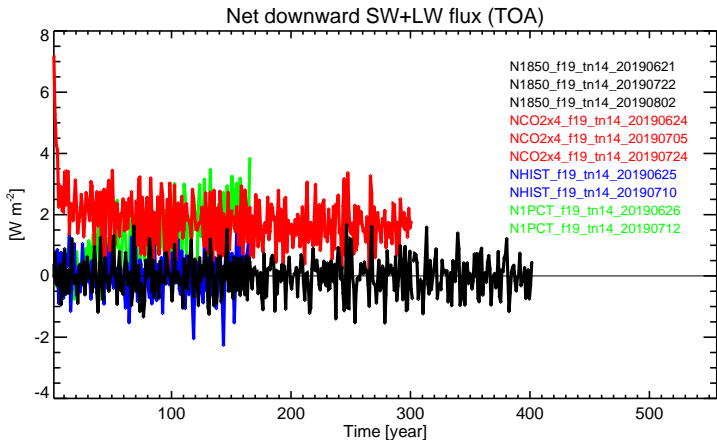
	Case	Length [year]
piControl	N1850_f19_tn14_20190621	1–200
	N1850_f19_tn14_20190722	201–300
	N1850_f19_tn14_20190802	301–400
4xCO2	NCO2x4_f19_tn14_20190624	1–120
	NCO2x4_f19_tn14_20190705	121–150
	NCO2x4_f19_tn14_20190724	151–300
1pctCO2	N1PCT_f19_tn14_20190626	1–120
	N1PCT_f19_tn14_20190712	121–165
historical	NHIST_f19_tn14_20190625	1850–1949
	NHIST_f19_tn14_20190710	1950–2014

Remark The 1pctCO2 is run until 165, where the forcing is already stronger than 4xCO2 (4xCO2 forcing is reached after 140yr).

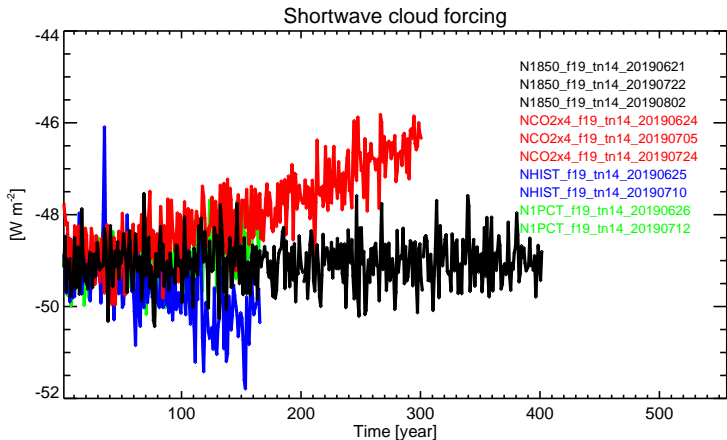
Global mean surface (2 m) air temperature: 2x2



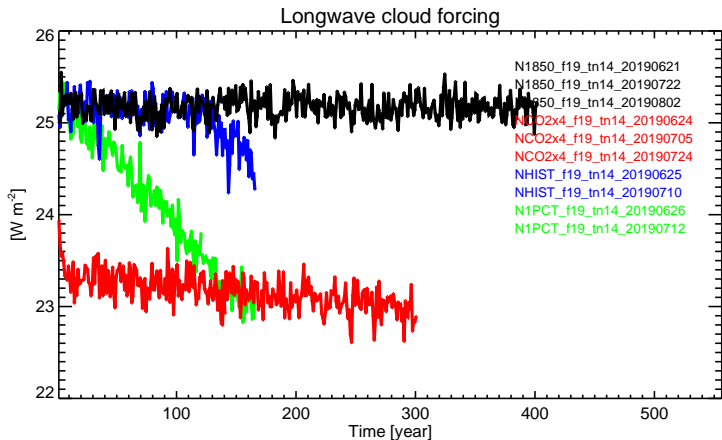
TOA imbalance : 2x2



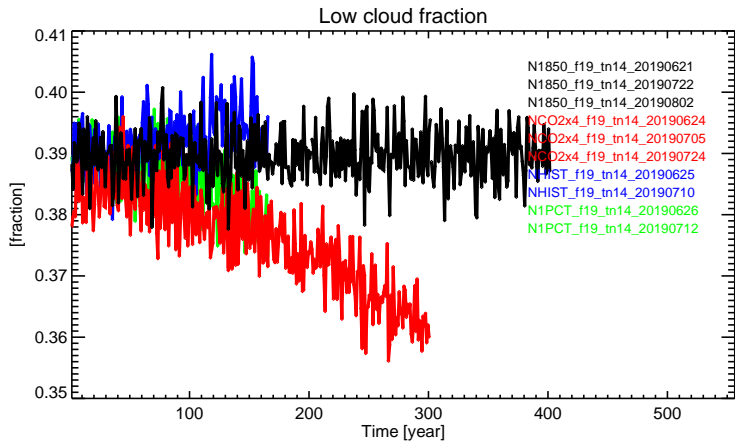
Global mean SW cloud forcing: 2x2



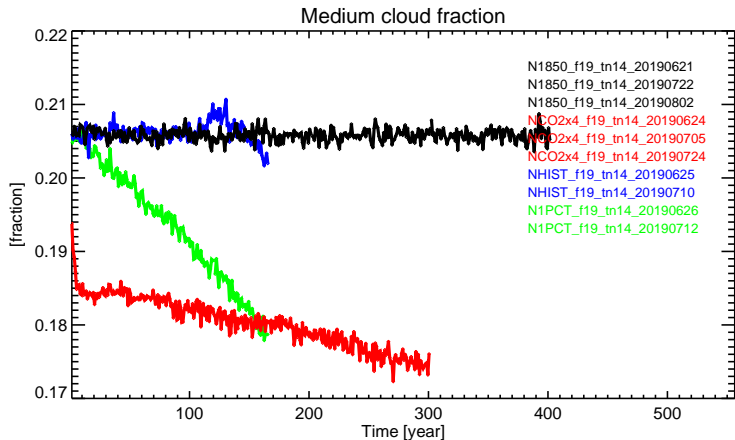
Global mean LW cloud forcing: 2x2



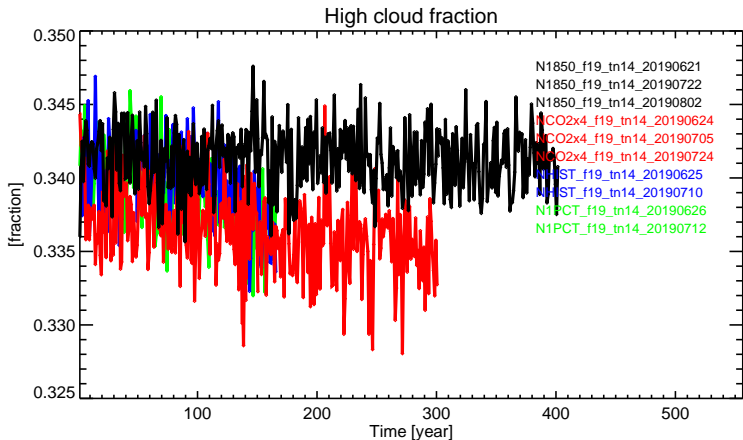
Global mean low clouds: 2x2



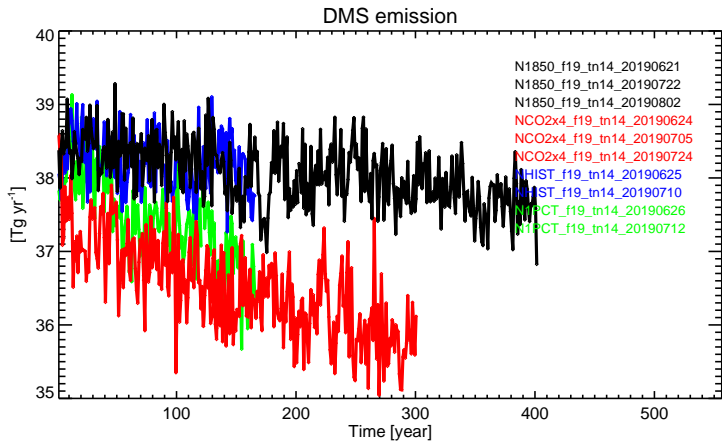
Global mean medium clouds: 2x2



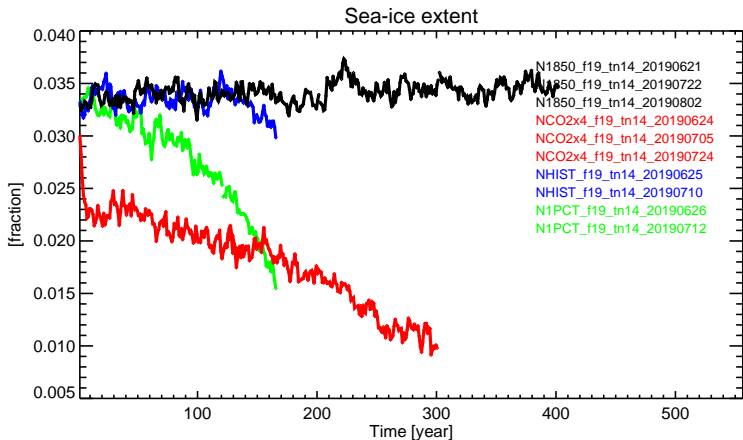
Global mean high clouds: 2x2



Global DMS emissions: 2x2



Global ice fraction: 2x2

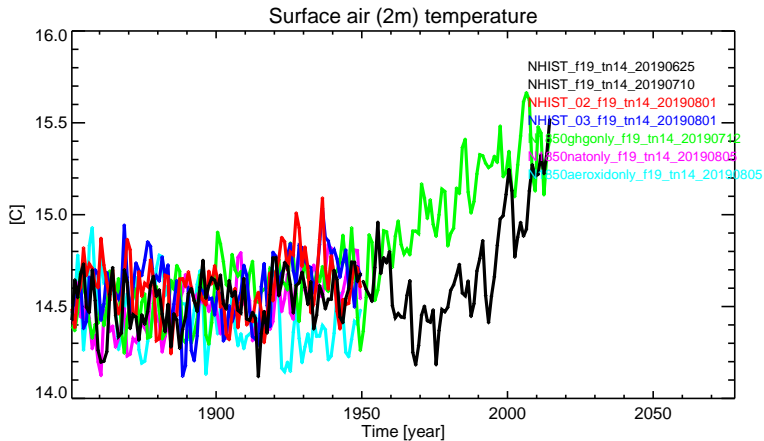


DAMIP historical simulations

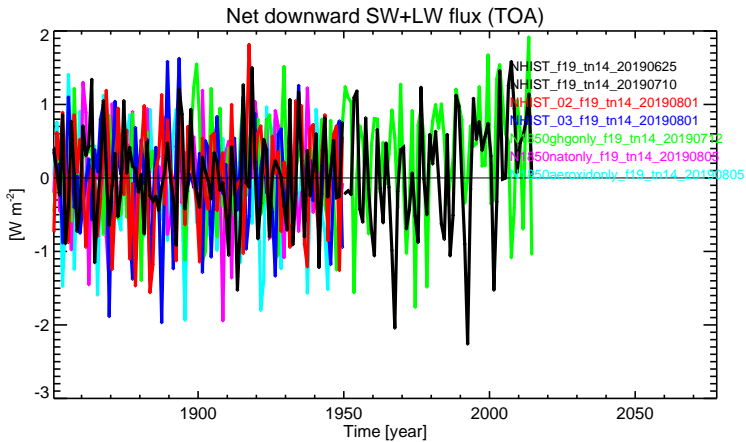
Experiments

	Case	Length [year]
historical	NHIST_f19_tn14_20190625	1850–1949
	NHIST_f19_tn14_20190710	1950–2014
historical 2	NHIST_02_f19_tn14_20190801	1850–1949
historical 3	NHIST_03_f19_tn14_20190801	1850–1949
ghg-only	N1850ghgonly_f19_tn14_20190712	1850–1949
nat-only	N1850natonly_f19_tn14_20190805	1850–1949
aer(+oxid)-only	N1850aeroxidonly_f19_tn14_20190805	1850–1949

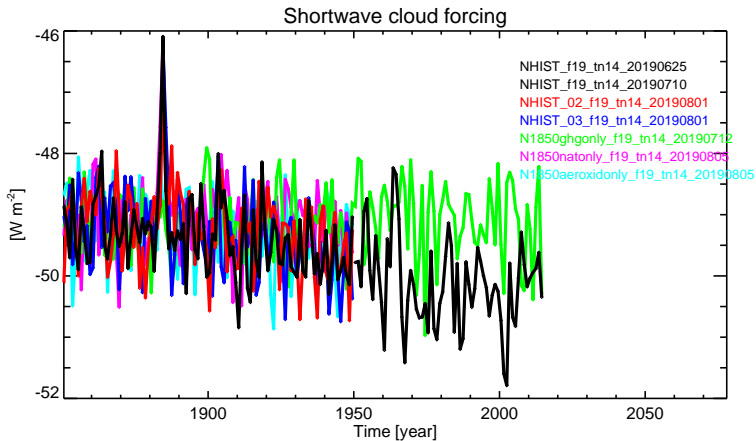
Global mean surface (2 m) air temperature: 2x2



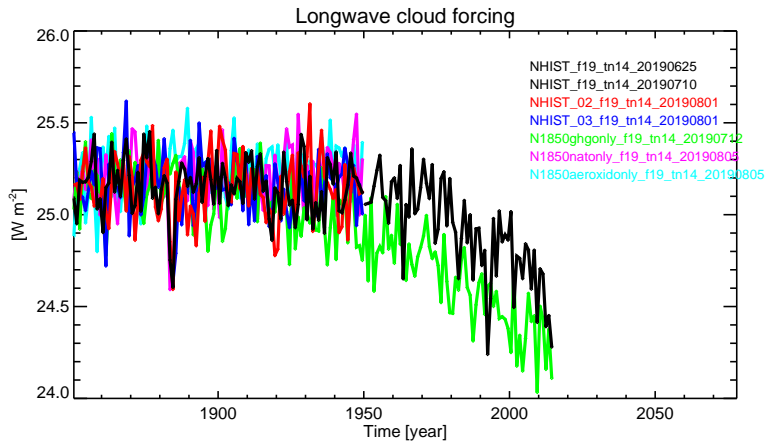
TOA imbalance : 2x2



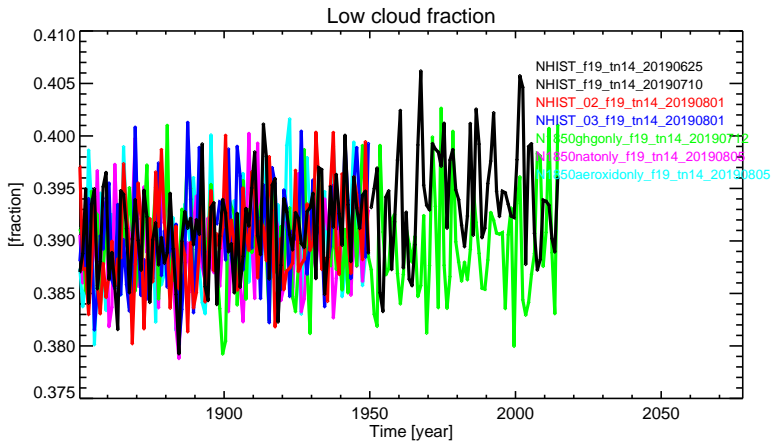
Global mean SW cloud forcing: 2x2



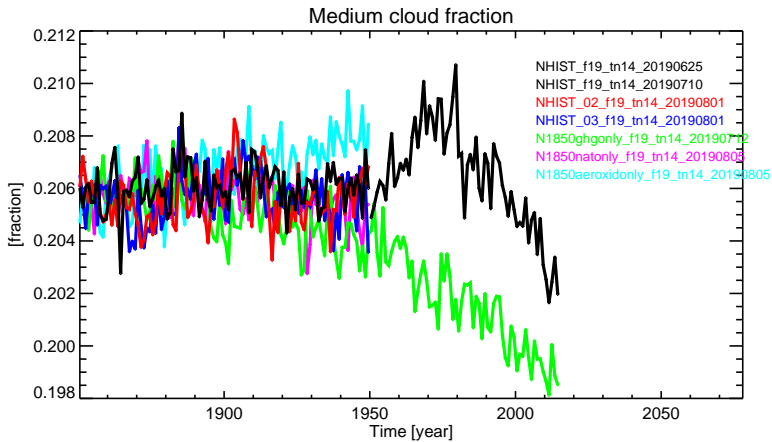
Global mean LW cloud forcing: 2x2



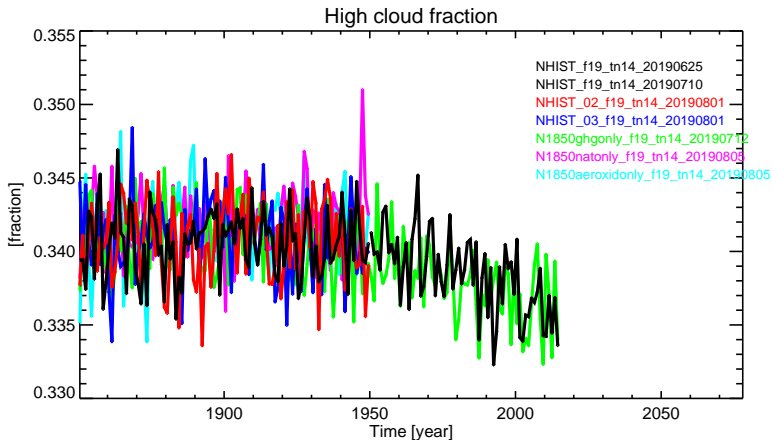
Global mean low clouds: 2x2



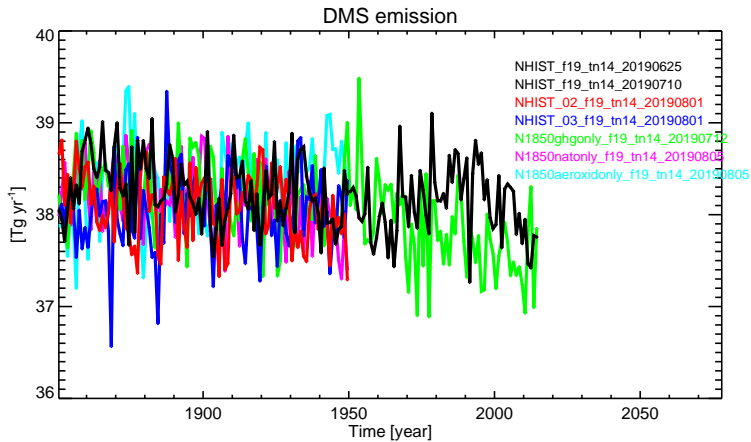
Global mean medium clouds: 2x2



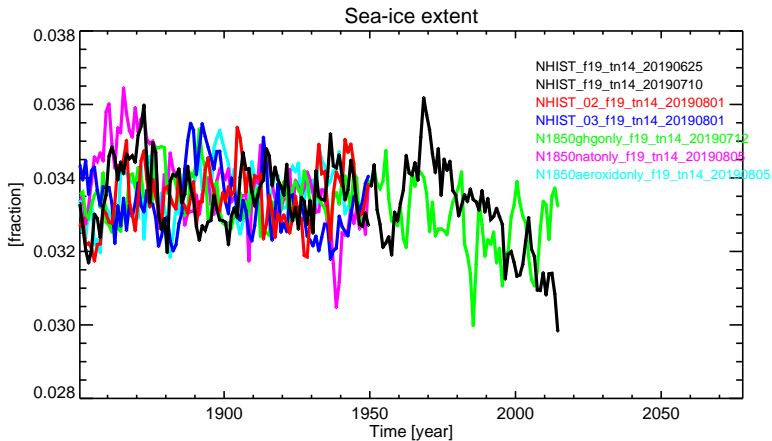
Global mean high clouds: 2x2



Global DMS emissions: 2x2



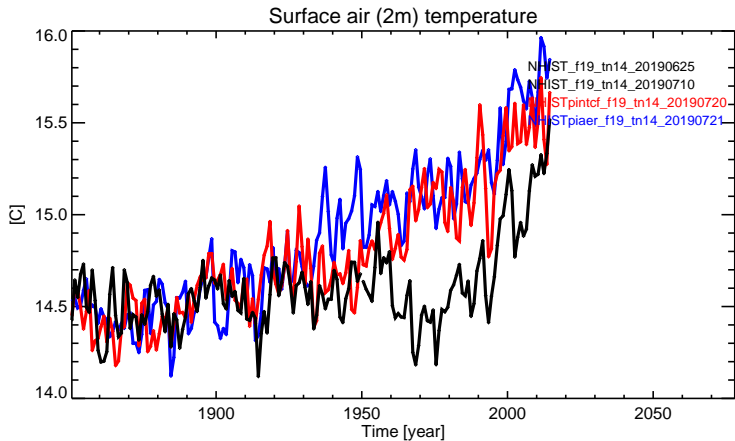
Global ice fraction: 2x2



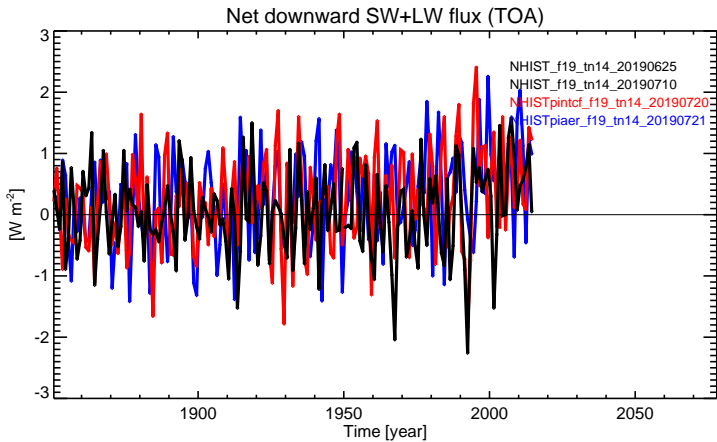
Experiments

	Case	Length [year]
historical	NHIST_f19_tn14_20190625	1850–1949
	NHIST_f19_tn14_20190710	1950–2014
hist-pintcf	NHISTpintcf_f19_tn14_20190720	1850–2014
hist-piaer	NHISTpiaer_f19_tn14_20190721	1850–2014

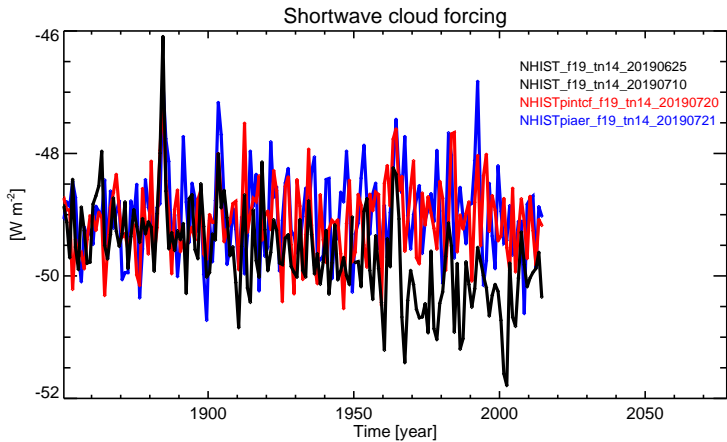
Global mean surface (2 m) air temperature: 2x2



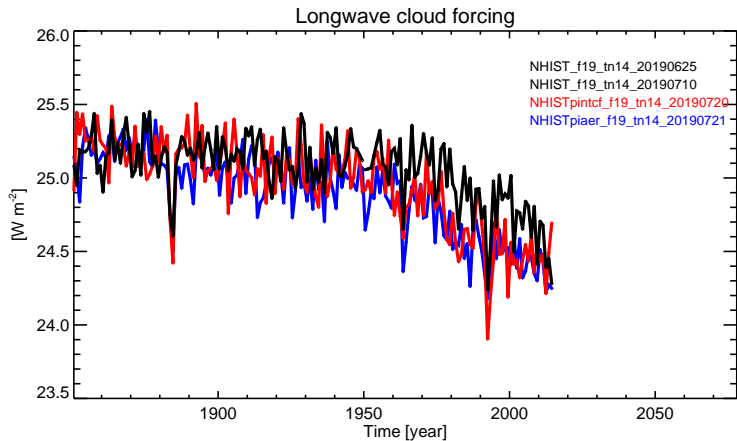
TOA imbalance : 2x2



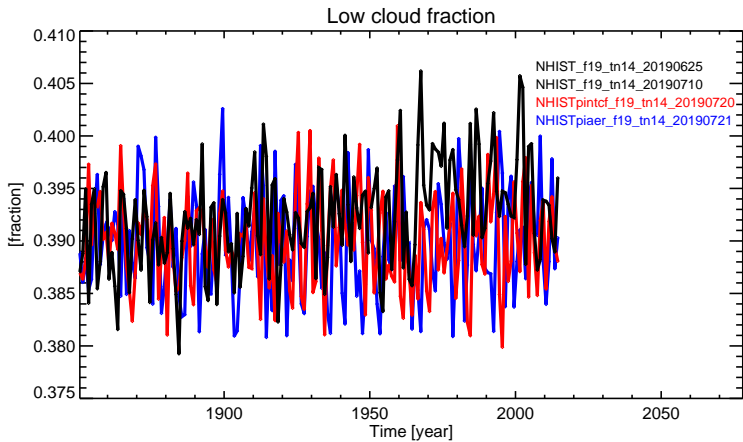
Global mean SW cloud forcing: 2x2



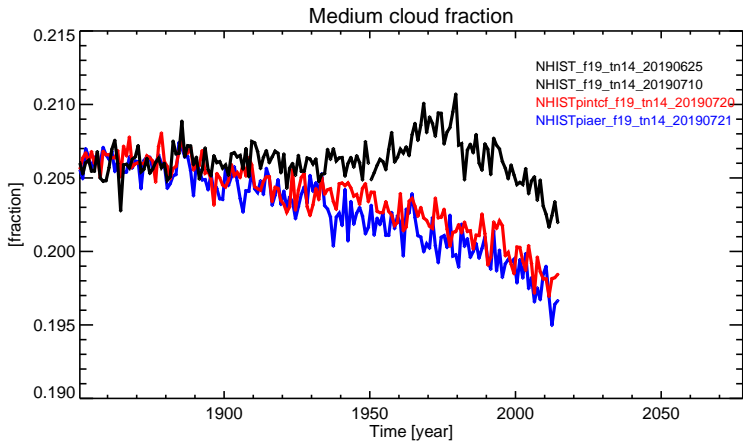
Global mean LW cloud forcing: 2x2



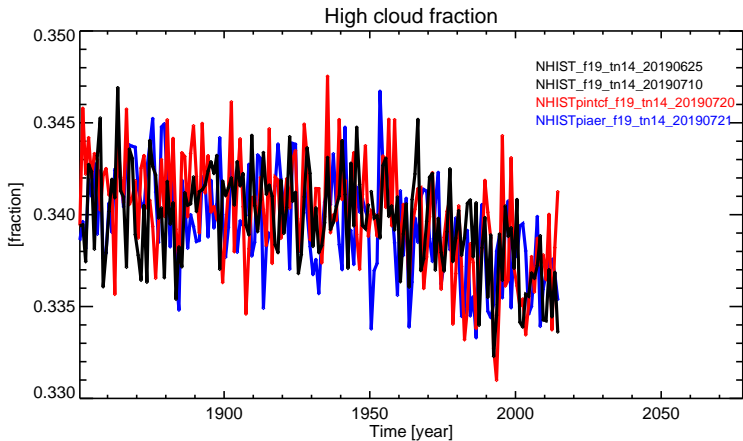
Global mean low clouds: 2x2



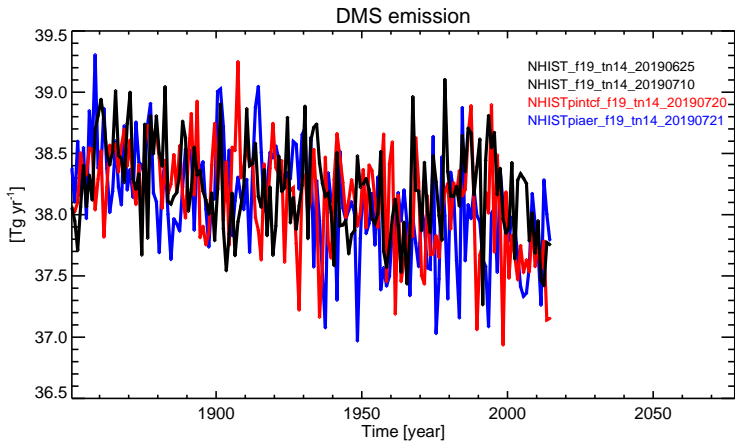
Global mean medium clouds: 2x2



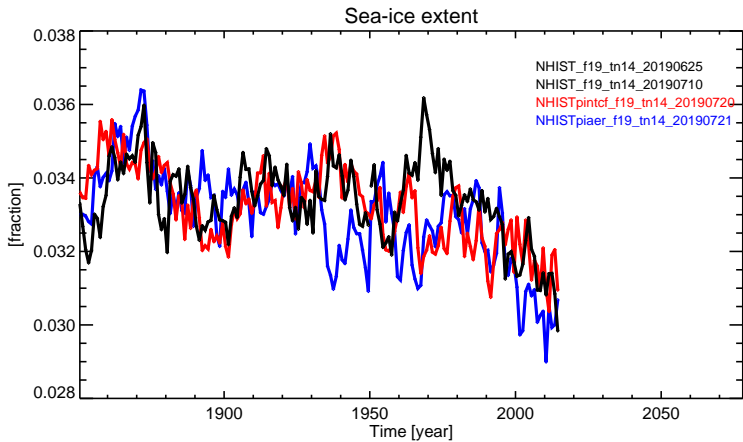
Global mean high clouds: 2x2



Global DMS emissions: 2x2



Global ice fraction: 2x2

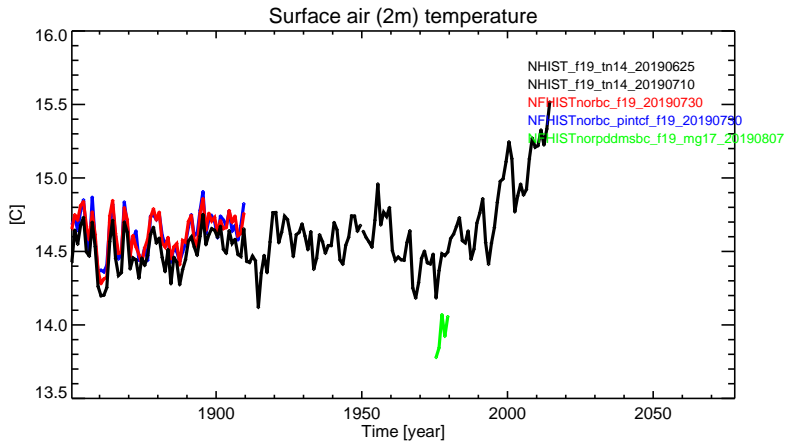


AerChemMIP fixed-SST historical simulations

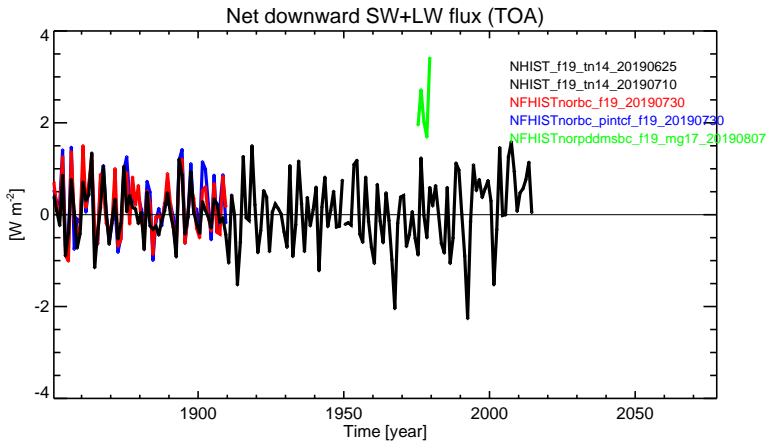
Experiments

	Case	Length [year]
historical	NHIST_f19_tn14_20190625	1850–1949
	NHIST_f19_tn14_20190710	1950–2014
fhist	NFHISTnorbc_f19_20190730	1850–1909
fhist-pintcf	NFHISTnorbc_pintcf_f19_20190730	1850–1909
fhist-amip	NFHISTnorpddmsbc_f19_mg17_20190807	1975–1979

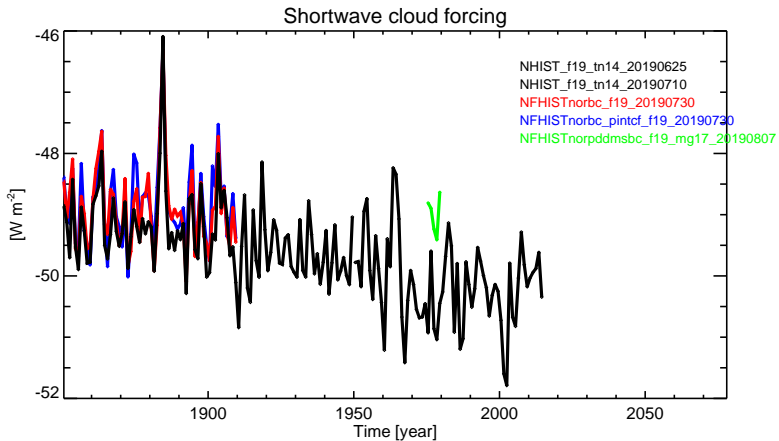
Global mean surface (2 m) air temperature: 2x2



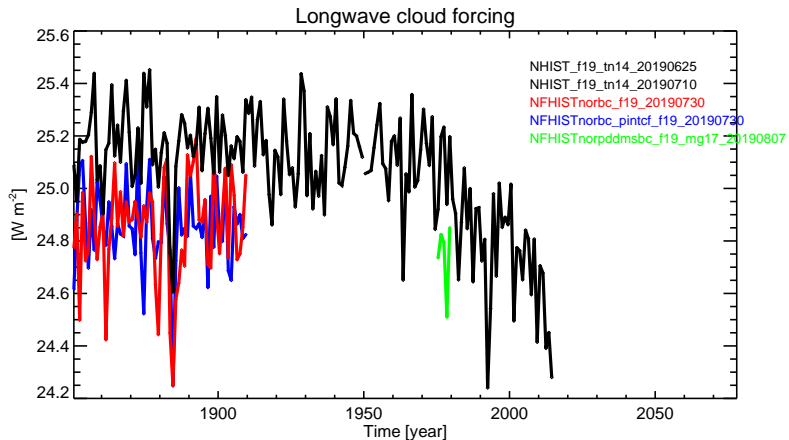
TOA imbalance : 2x2



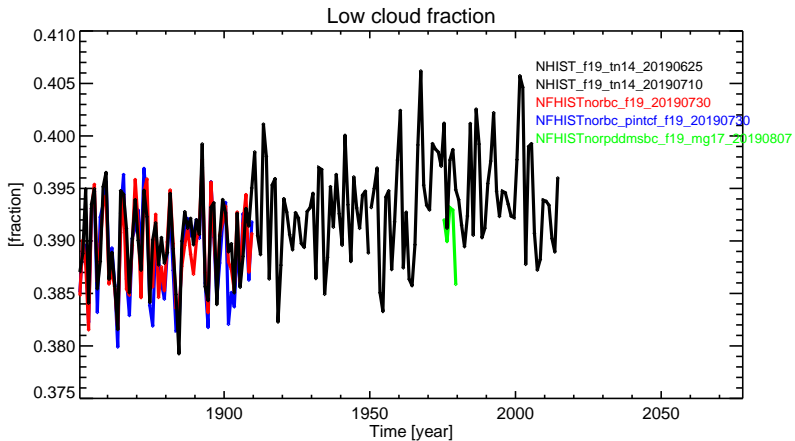
Global mean SW cloud forcing: 2x2



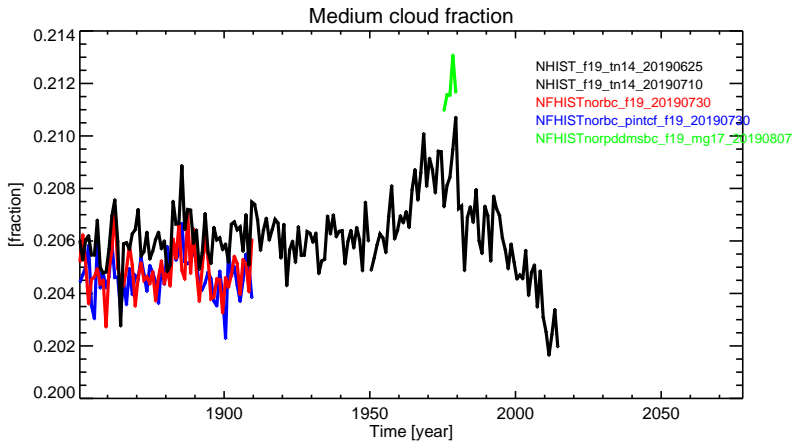
Global mean LW cloud forcing: 2x2



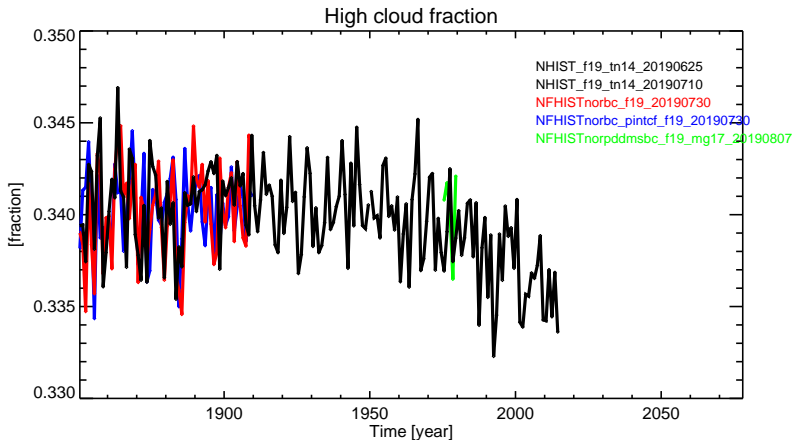
Global mean low clouds: 2x2



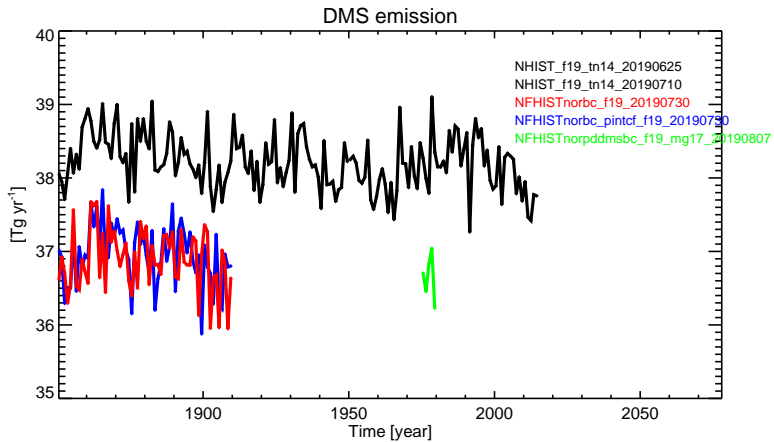
Global mean medium clouds: 2x2



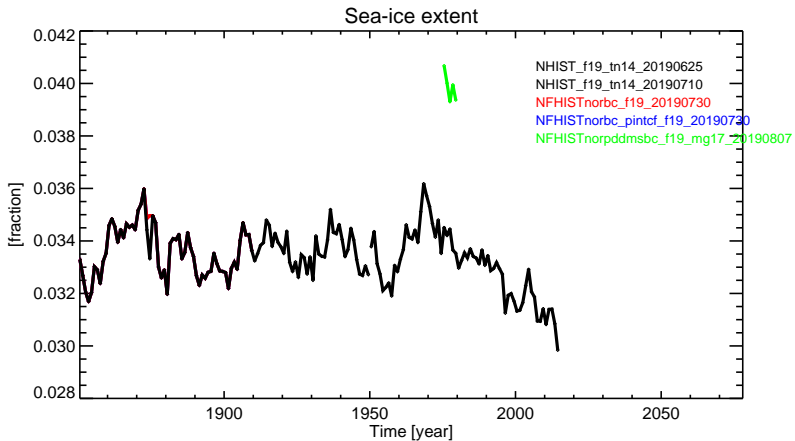
Global mean high clouds: 2x2



Global DMS emissions: 2x2



Global ice fraction: 2x2

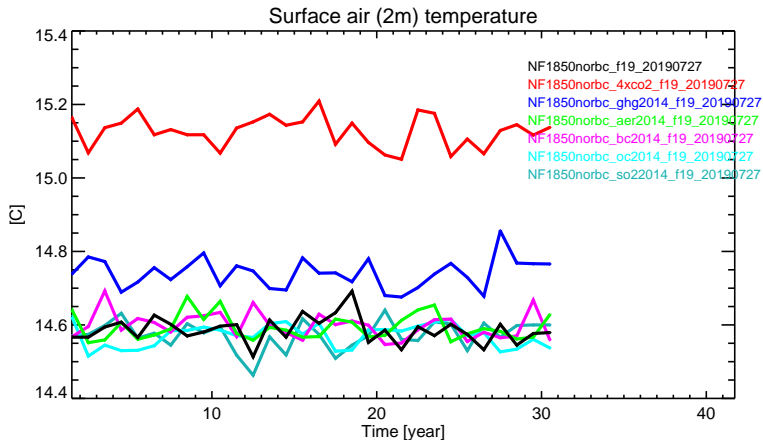


AerChemMIP fixed SST historical simulations

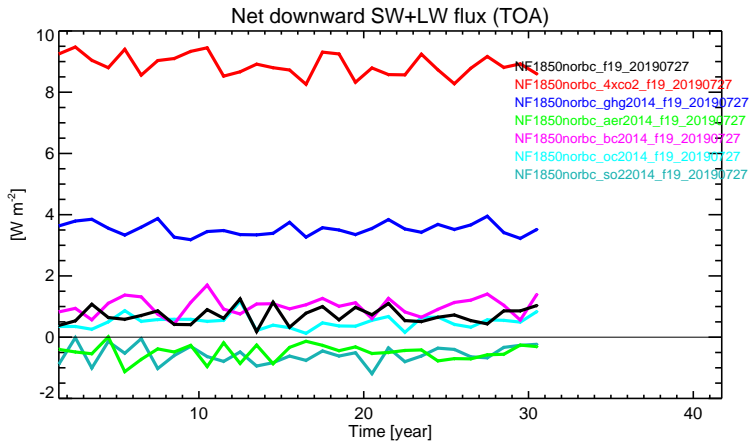
Experiments

	Case	Length [year]
	NF1850norbc_f19_20190727	1–30
4xCO2	NF1850norbc_4xco2_f19_20190727	1–30
ghg2014	NF1850norbc_ghg2014_f19_20190727	1–30
aer2014	NF1850norbc_aer2014_f19_20190727	1–30
bc2014	NF1850norbc_bc2014_f19_20190727	1–30
oc2014	NF1850norbc_oc2014_f19_20190727	1–30
so22014	NF1850norbc_so22014_f19_20190727	1–30
aeroxid2014	(running)	
anthro2014	(running)	
lu2014		

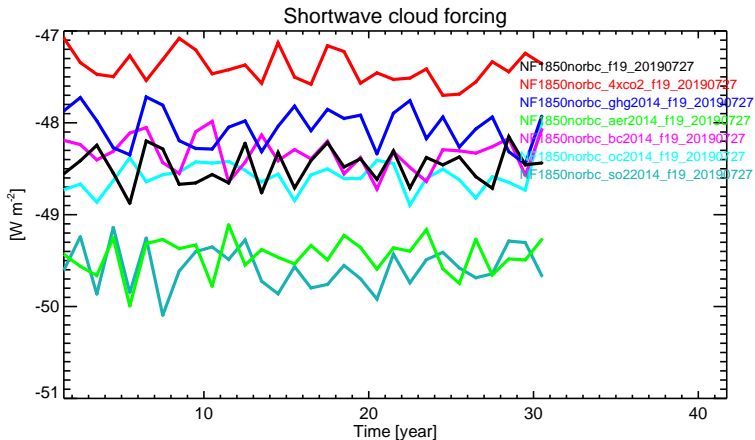
Global mean surface (2 m) air temperature: 2x2



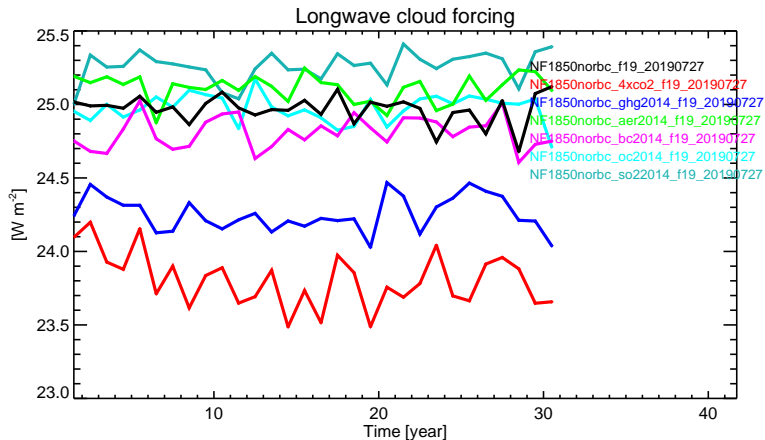
TOA imbalance : 2x2



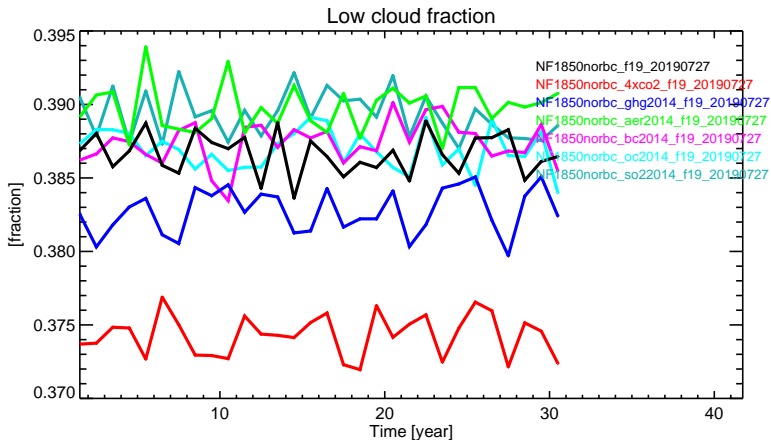
Global mean SW cloud forcing: 2x2



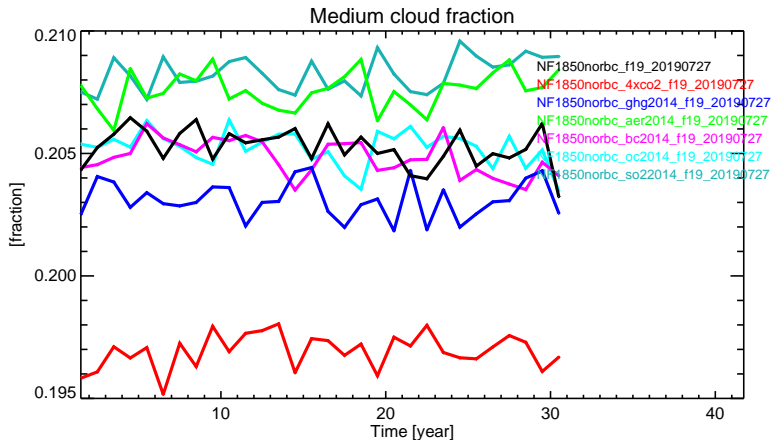
Global mean LW cloud forcing: 2x2



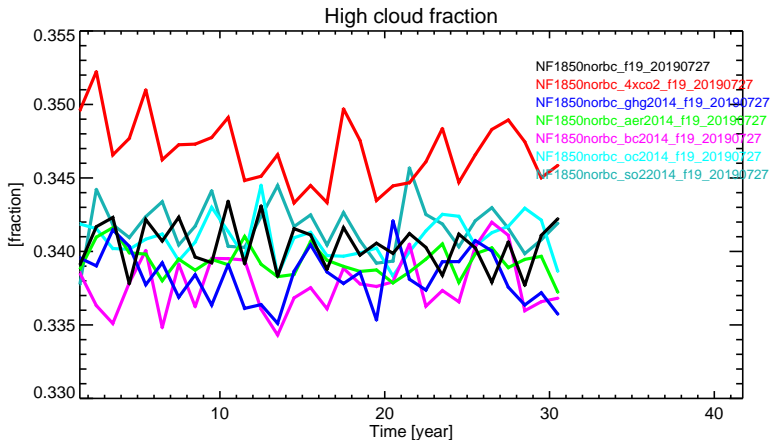
Global mean low clouds: 2x2



Global mean medium clouds: 2x2



Global mean high clouds: 2x2



Global DMS emissions: 2x2

