

Supplementary Materials for Projected changes in persistent extreme summer weather events: The role of quasi-resonant amplification by CMIP5 and CMIP6 models

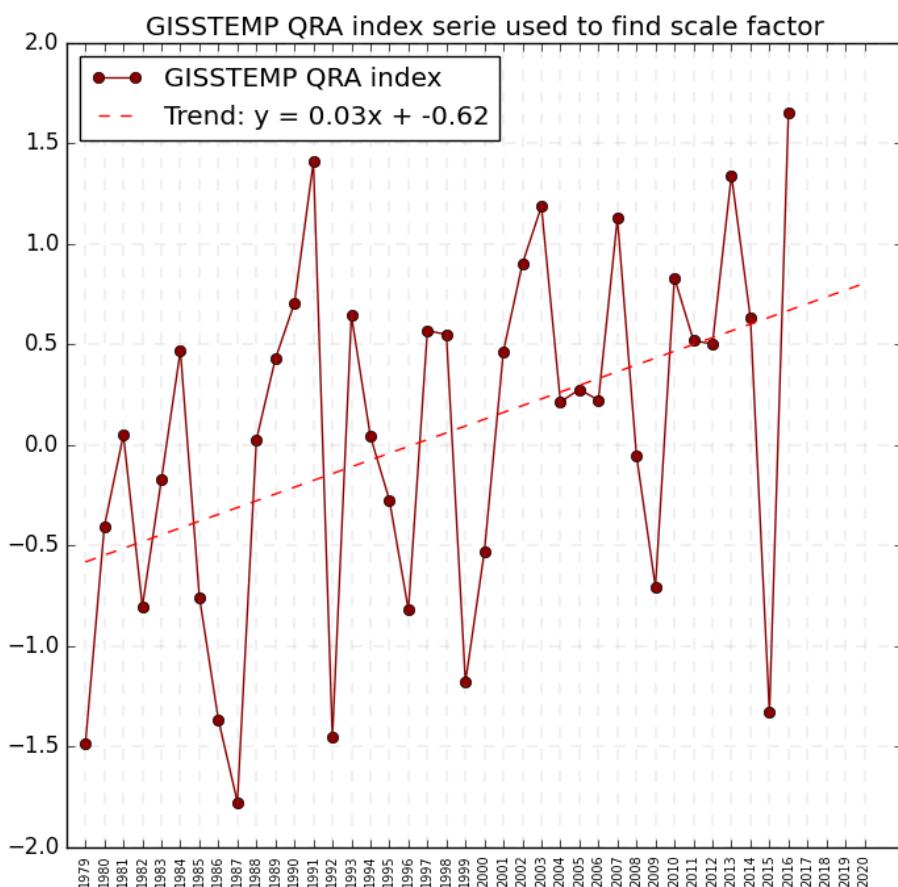
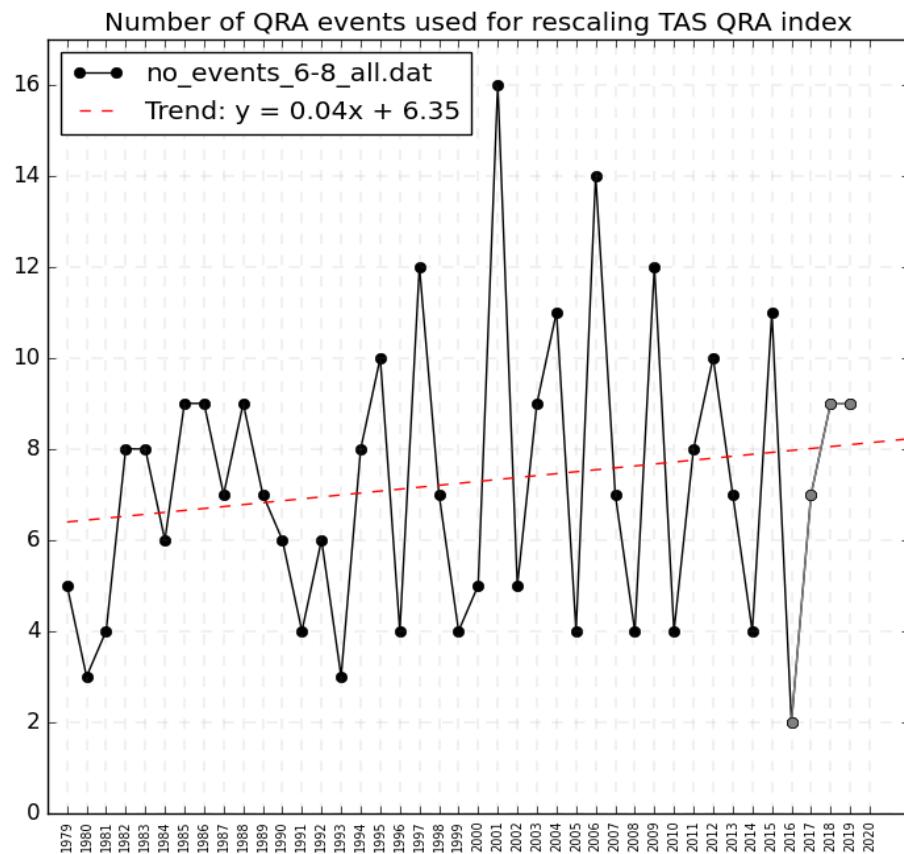
Mann et al., 2022

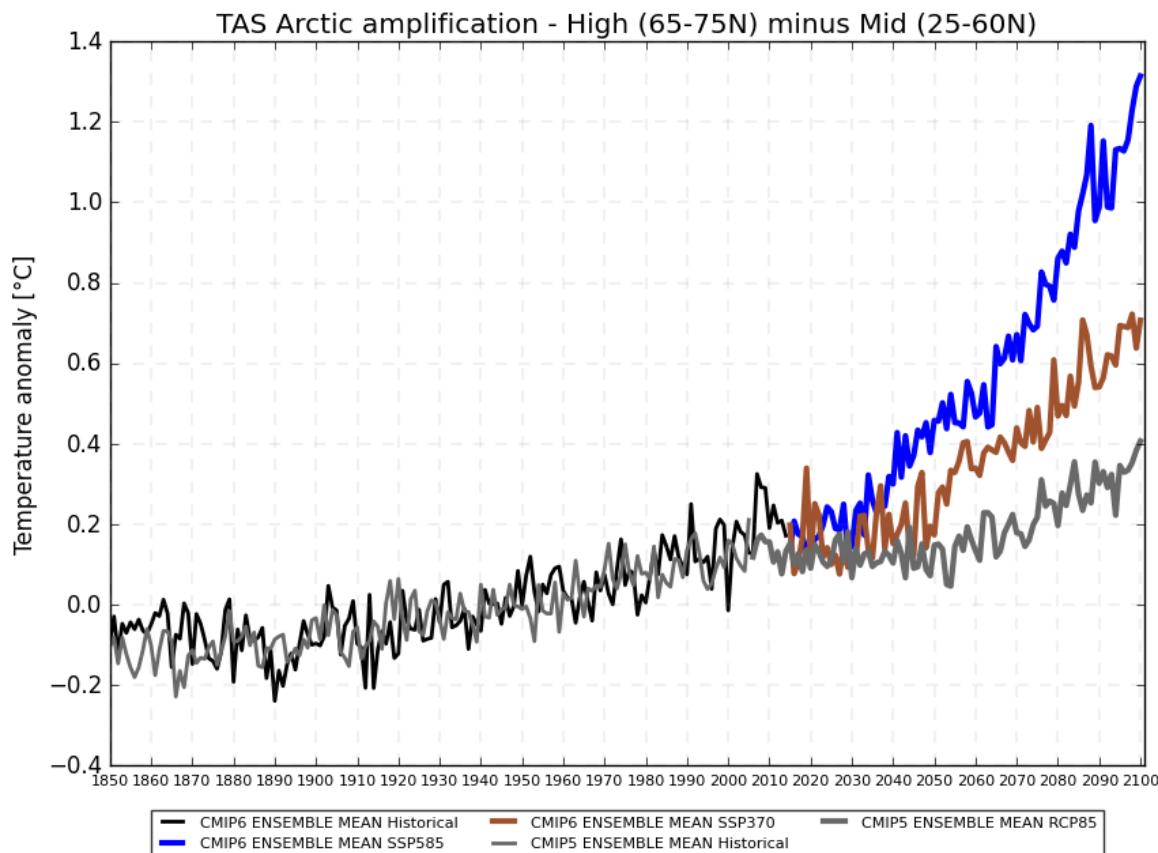
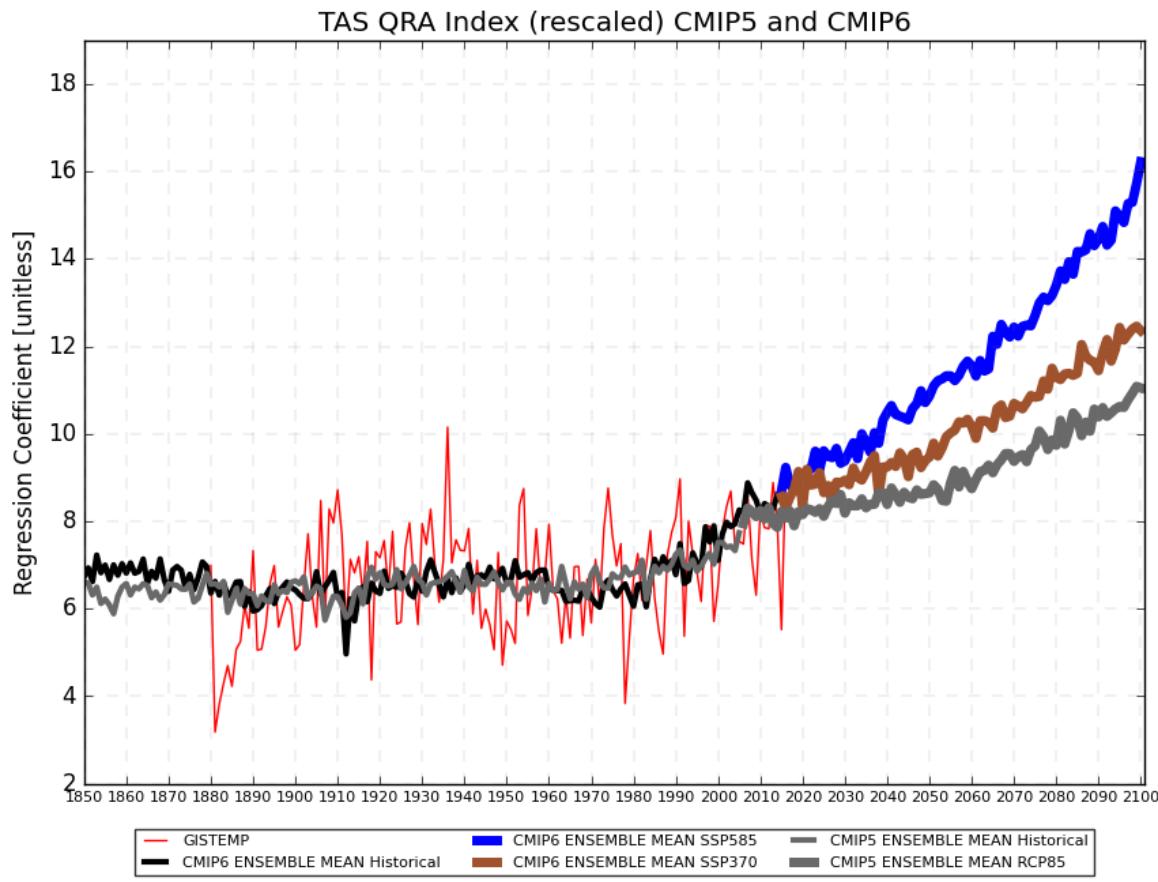
Produced by Sullyandro Guimarães

Sections

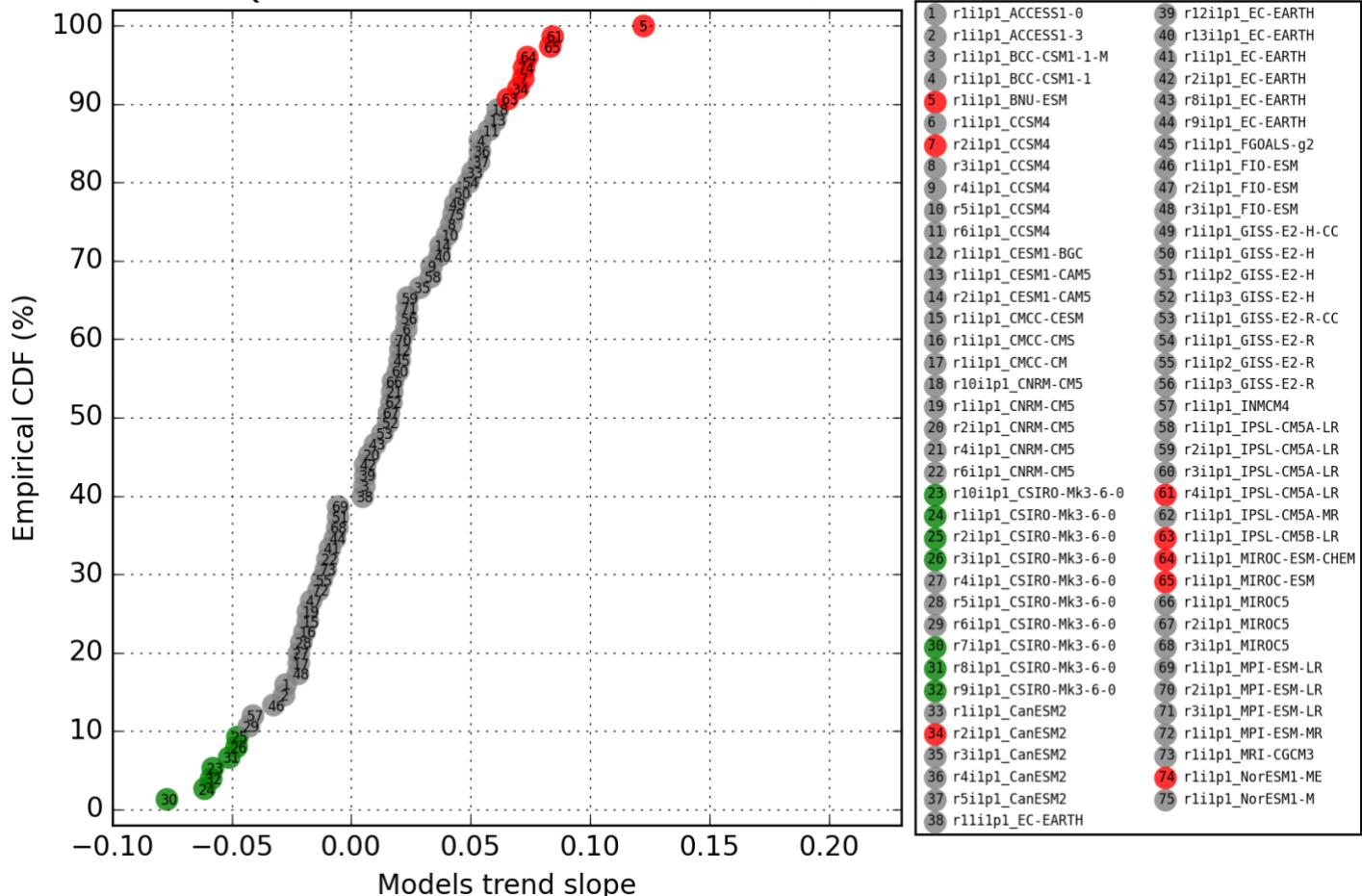
- 1. Main results**
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1. Main results

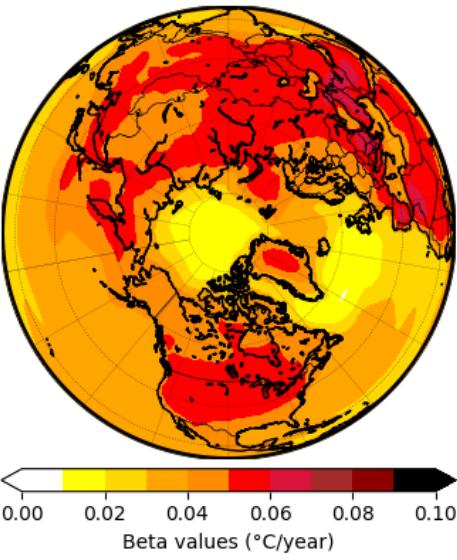




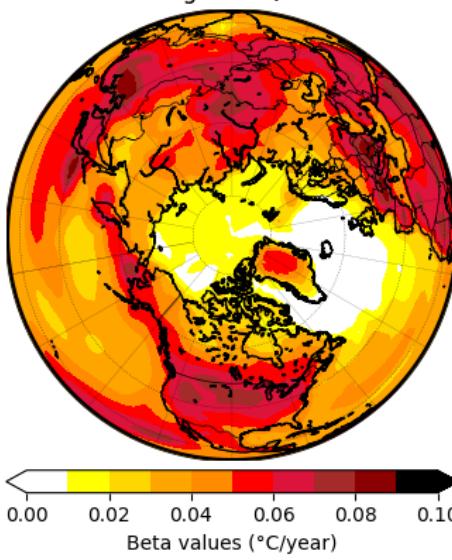
TAS QRA index - CMIP5 RCP85 2015-2050



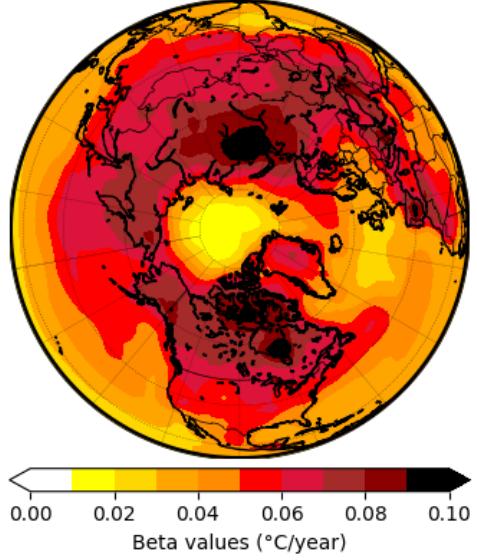
TAS trend (JJA seasonal mean)
CMIP5 RCP85 2015-2050
All Models



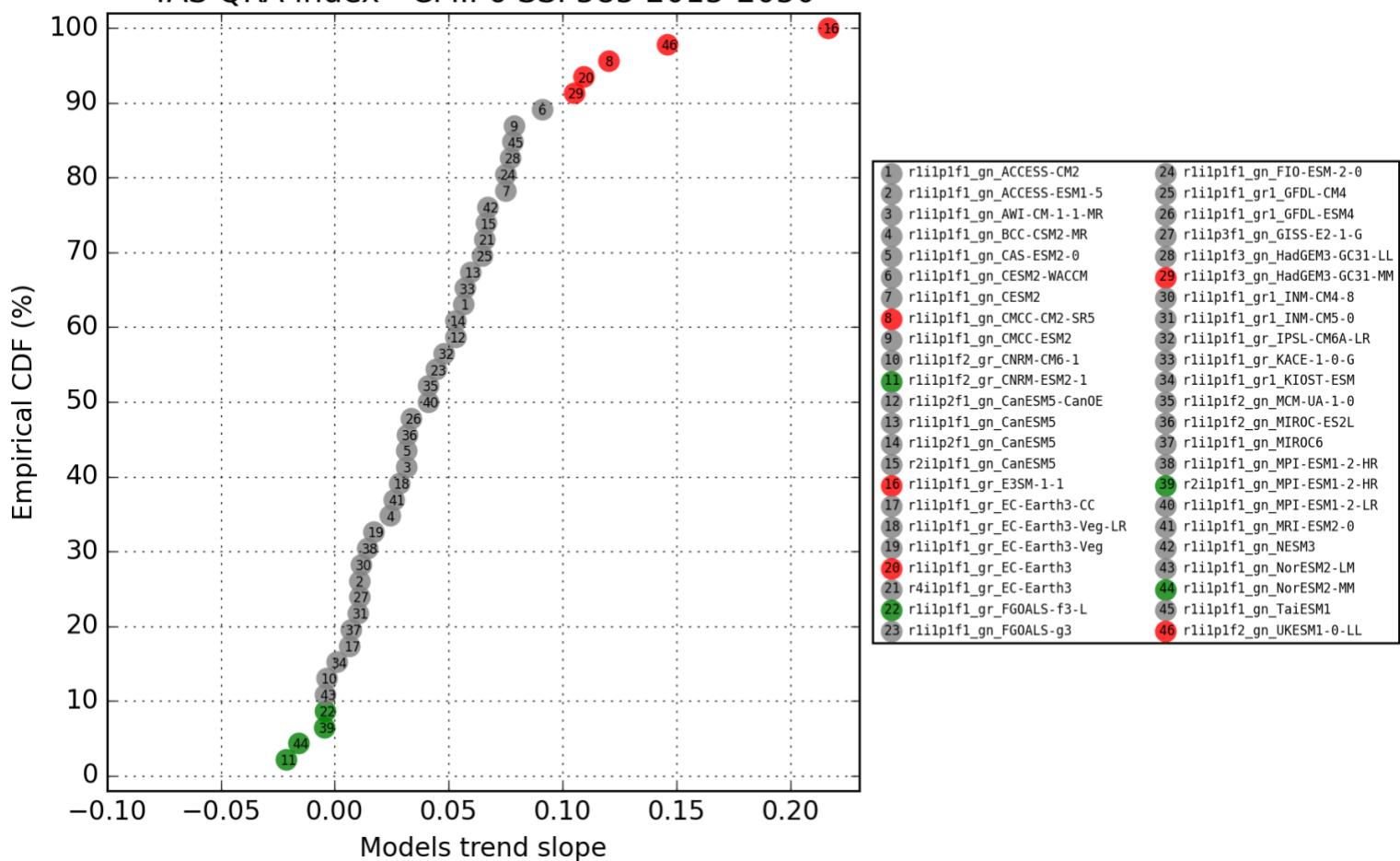
TAS trend (JJA seasonal mean)
CMIP5 RCP85 2015-2050
Negative QRA



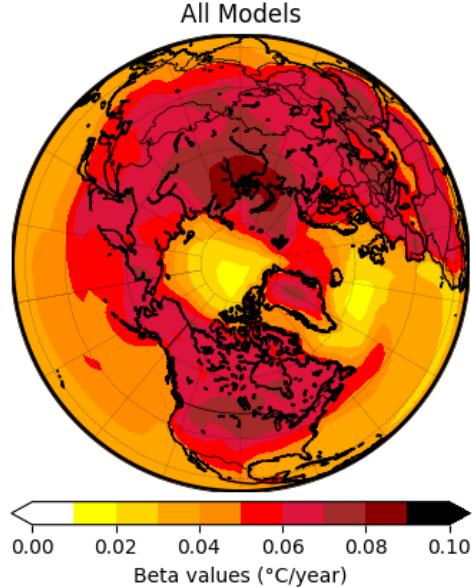
TAS trend (JJA seasonal mean)
CMIP5 RCP85 2015-2050
Positive QRA



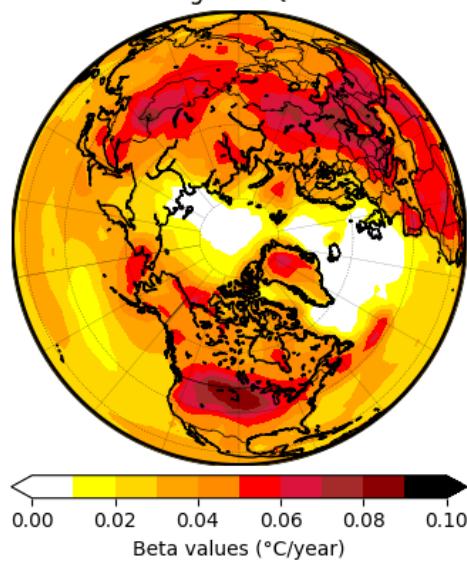
TAS QRA index - CMIP6 SSP585 2015-2050



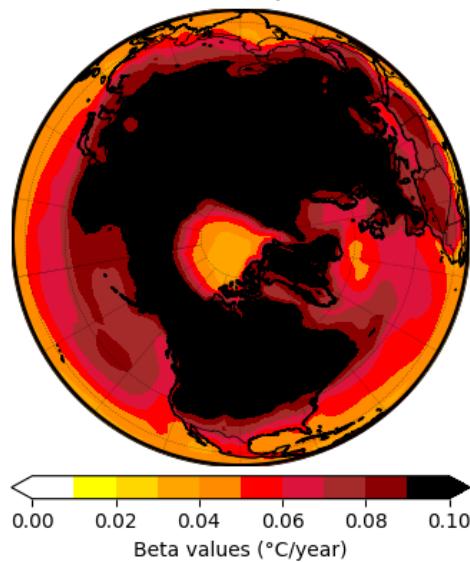
TAS trend (JJA seasonal mean)
CMIP6 SSP585 2015-2050



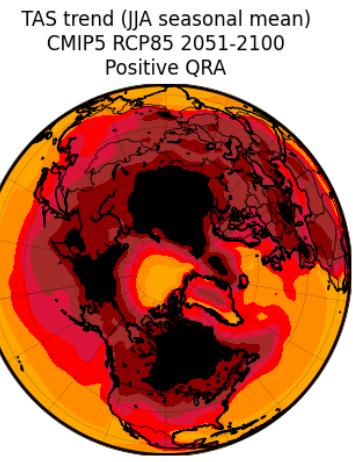
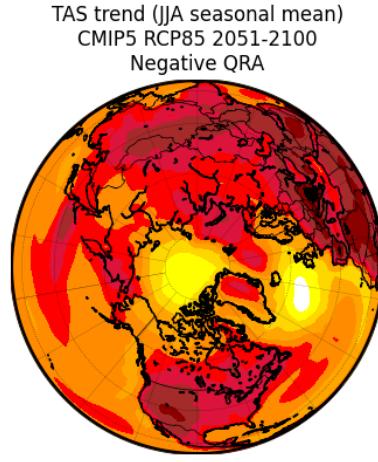
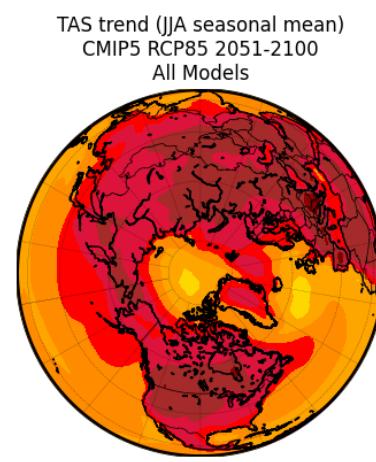
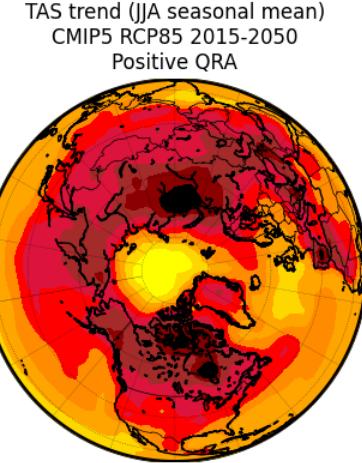
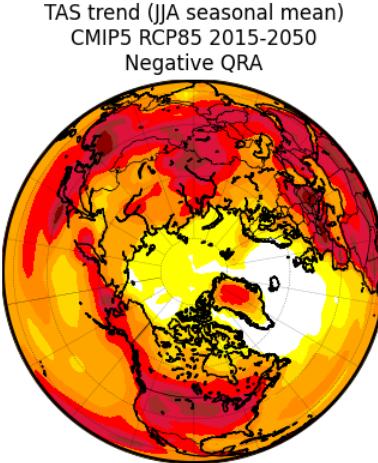
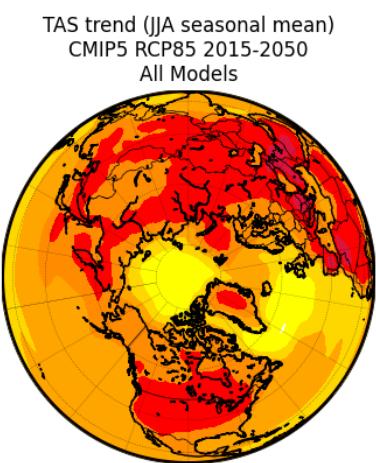
TAS trend (JJA seasonal mean)
CMIP6 SSP585 2015-2050
Negative QRA



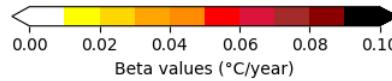
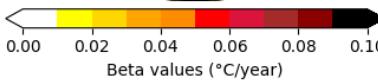
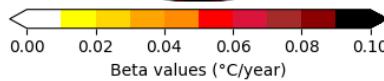
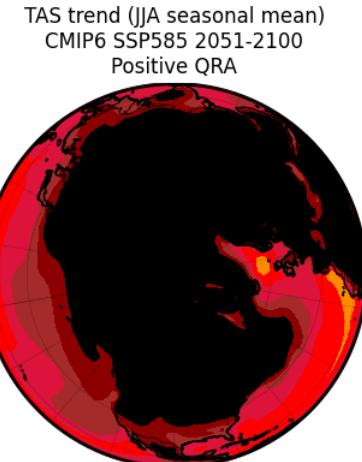
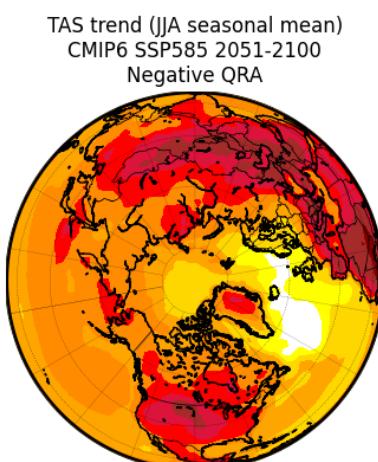
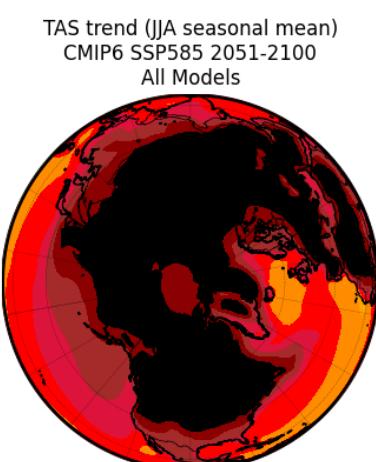
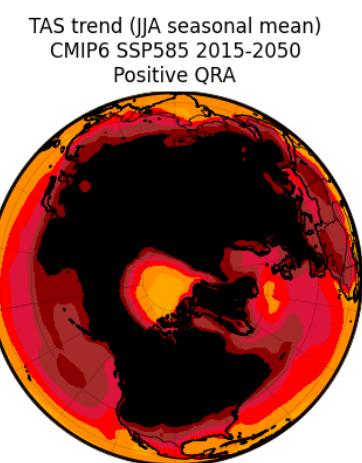
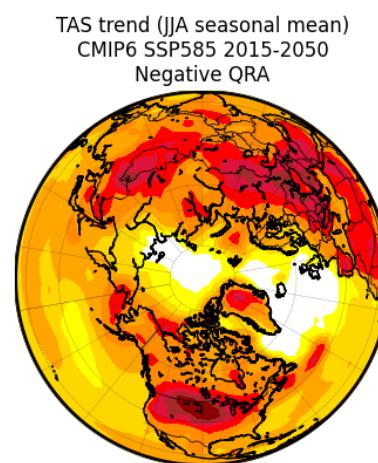
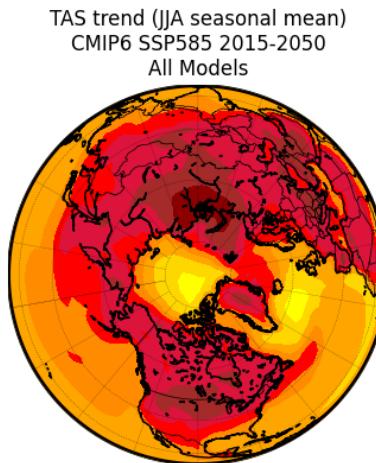
TAS trend (JJA seasonal mean)
CMIP6 SSP585 2015-2050
Positive QRA



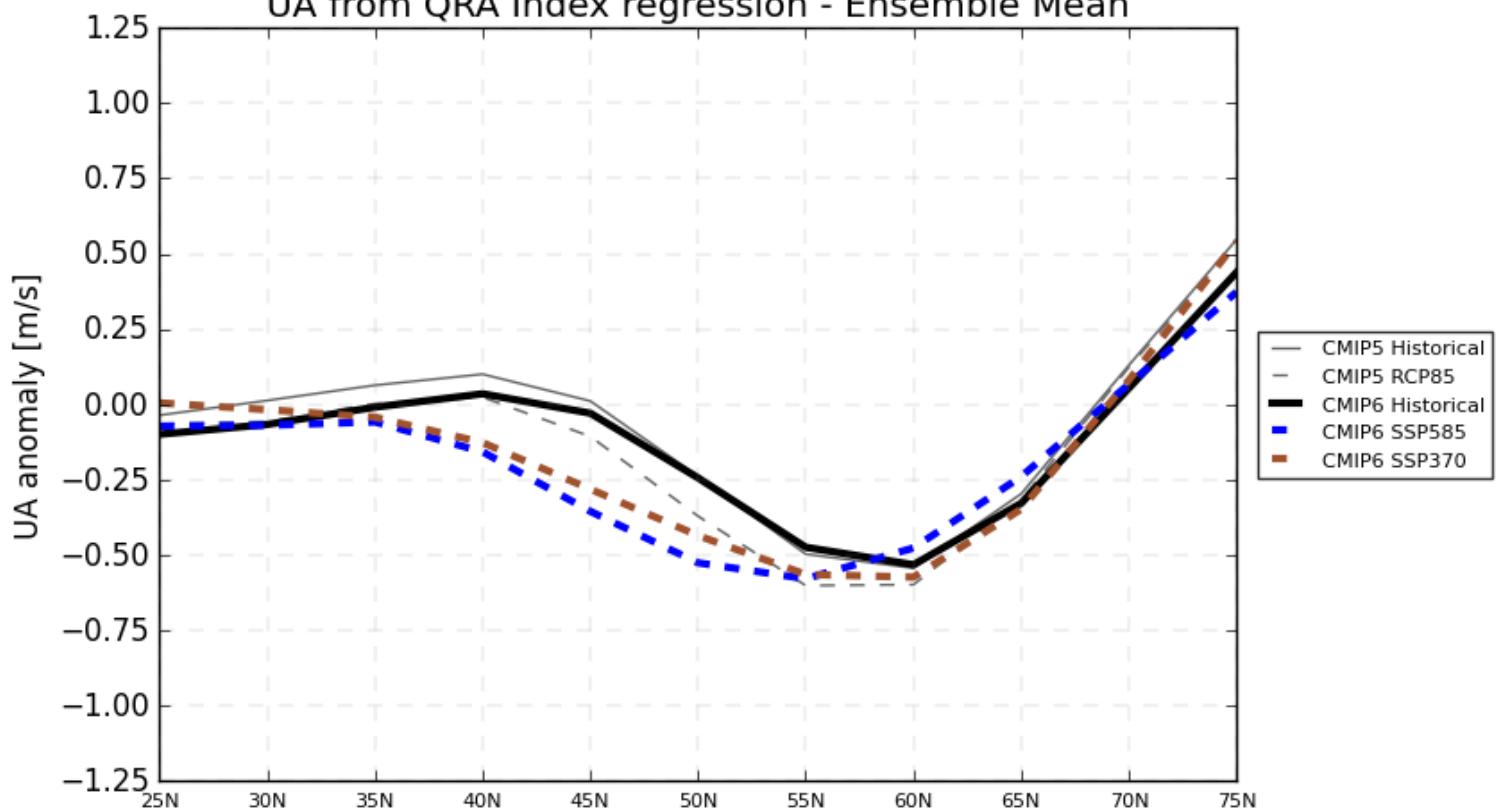
CMIP5



CMIP6

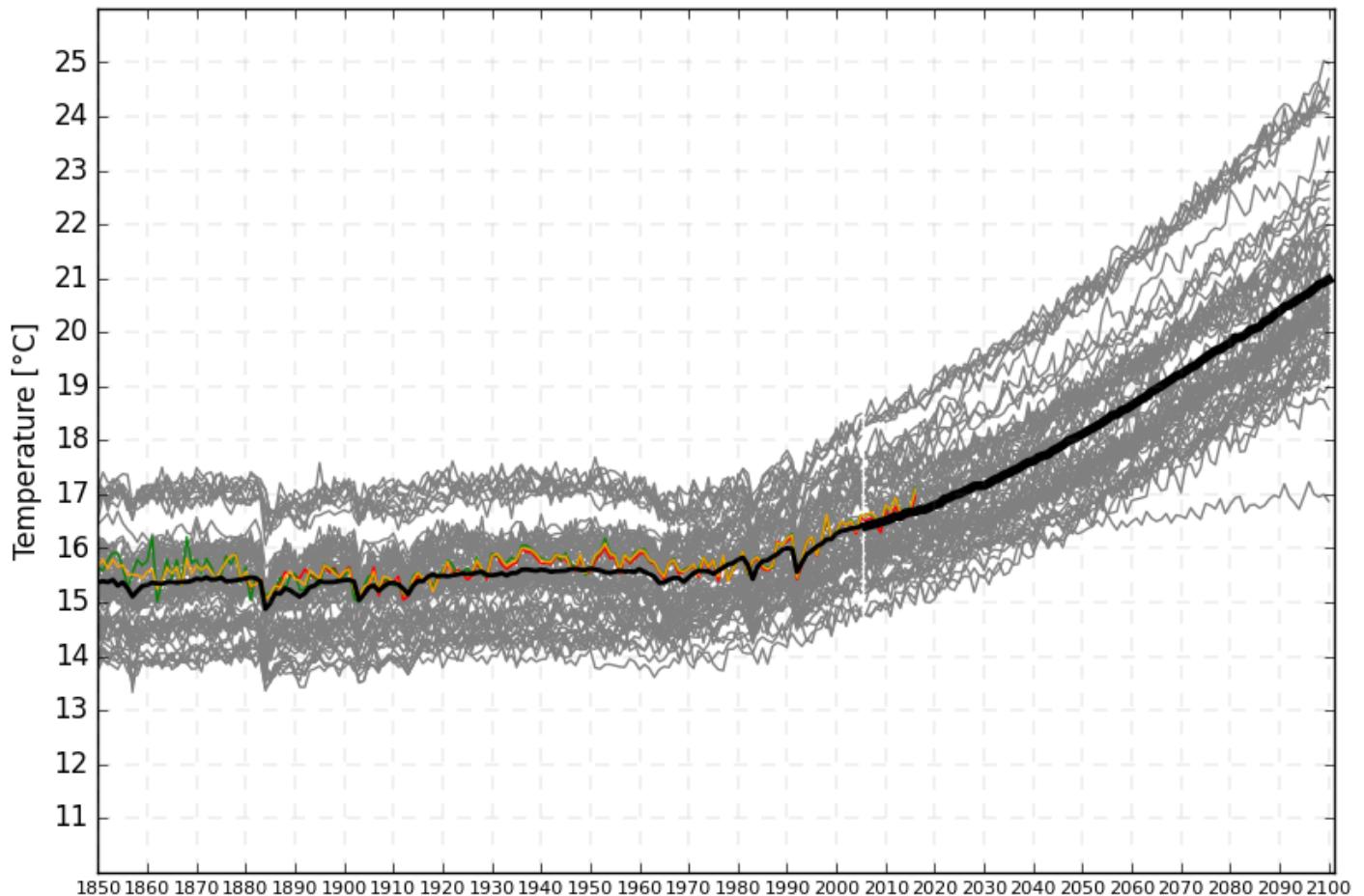


UA from QRA Index regression - Ensemble Mean



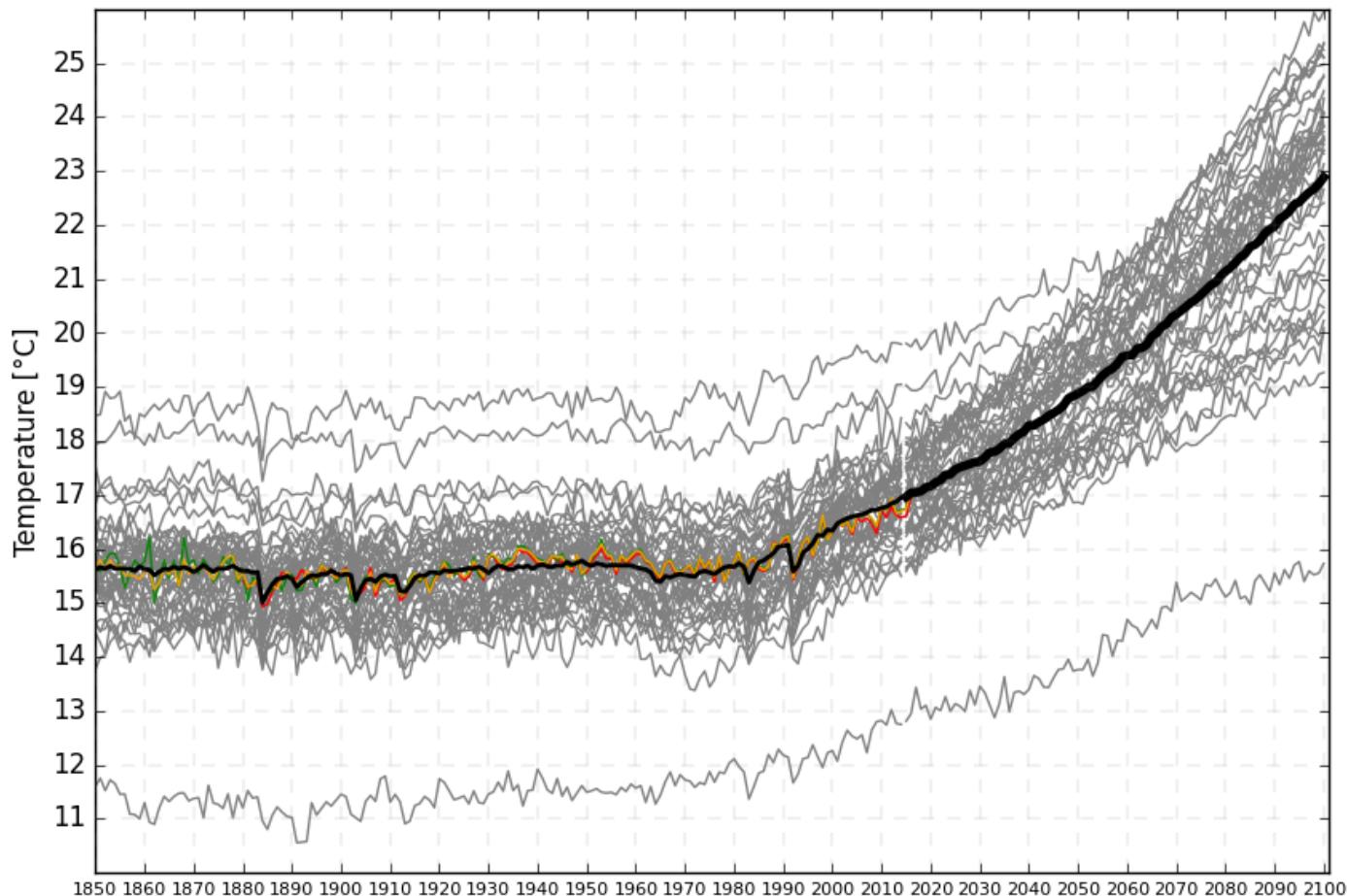
2. Temperature (TAS)

TAS - CMIP5 Historical and RCP85



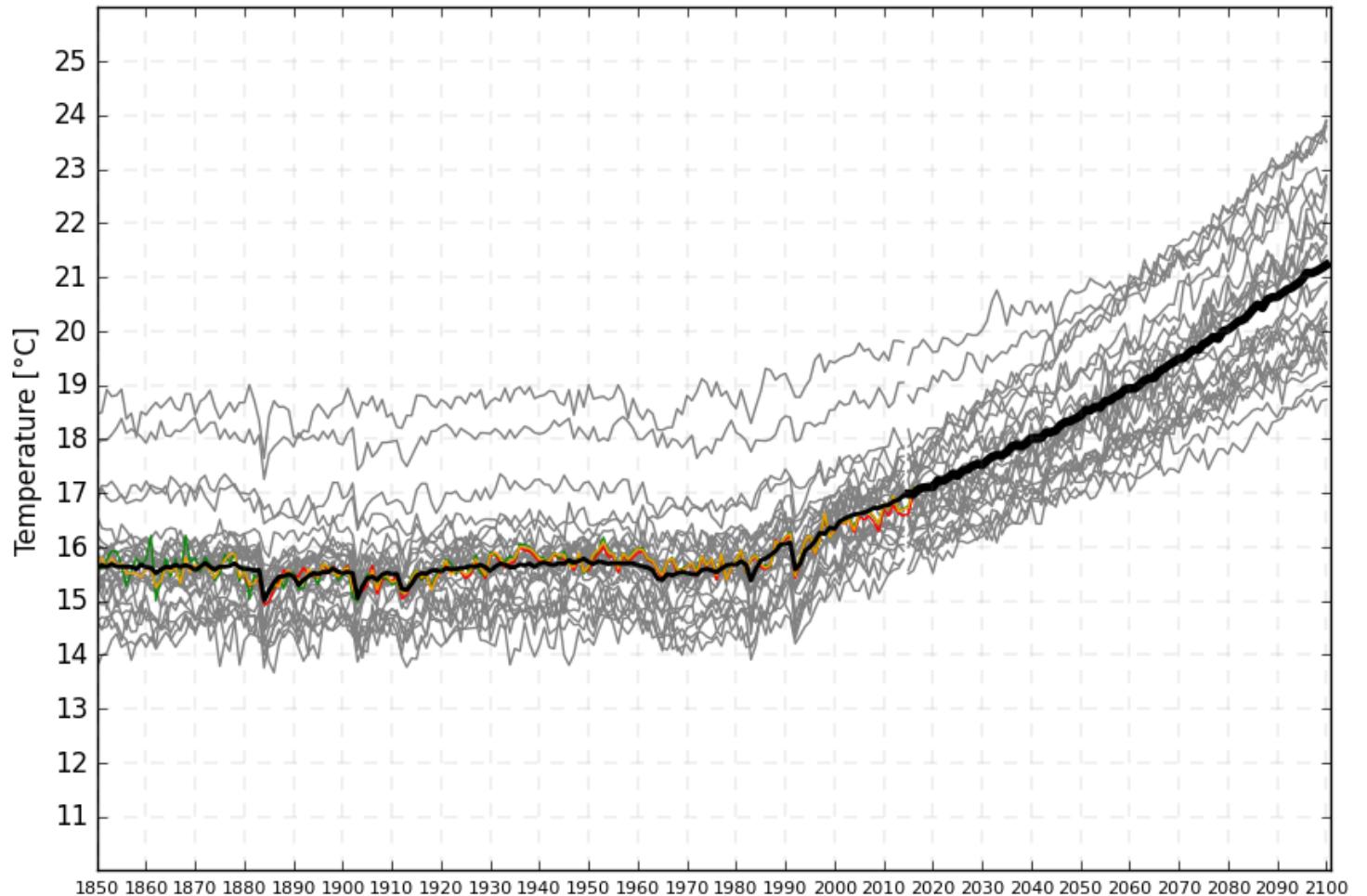
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— HadCRUT	— r1i1p1_null_CMCC-CM	— r5i1p1_null_CanESM2	— r1i1p1_null_INMCM4
— COWTAN and WAY	— r10i1p1_null_CNRM-CM5	— r11i1p1_null_EC-EARTH	— r1i1p1_null_IPSL-CM5A-LR
— CMIP5 ENSEMBLE MEAN Historical	— r1i1p1_null_CNRM-CM5	— r12i1p1_null_EC-EARTH	— r2i1p1_null_IPSL-CM5A-LR
— CMIP5 ENSEMBLE MEAN RCP85	— r2i1p1_null_CNRM-CM5	— r13i1p1_null_EC-EARTH	— r3i1p1_null_IPSL-CM5A-LR
— r1i1p1_null_ACCESS1-0	— r4i1p1_null_CNRM-CM5	— r1i1p1_null_EC-EARTH	— r4i1p1_null_IPSL-CM5A-LR
— r1i1p1_null_ACCESS1-3	— r6i1p1_null_CNRM-CM5	— r2i1p1_null_EC-EARTH	— r1i1p1_null_IPSL-CM5A-MR
— r1i1p1_null_BCC-CSM1-1-M	— r10i1p1_null_CSIRO-Mk3-6-0	— r8i1p1_null_EC-EARTH	— r1i1p1_null_IPSL-CM5B-LR
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— r1i1p1_null_BNU-ESM	— r2i1p1_null_CSIRO-Mk3-6-0	— r1i1p1_null_FGOALS-g2	— r1i1p1_null_MIROC-ESM
— r1i1p1_null CCSM4	— r3i1p1_null_CSIRO-Mk3-6-0	— r1i1p1_null_FIO-ESM	— r1i1p1_null_MIROC5
— r2i1p1_null CCSM4	— r4i1p1_null_CSIRO-Mk3-6-0	— r2i1p1_null_FIO-ESM	— r2i1p1_null_MIROC5
— r3i1p1_null CCSM4	— r5i1p1_null_CSIRO-Mk3-6-0	— r3i1p1_null_FIO-ESM	— r3i1p1_null_MIROC5
— r4i1p1_null CCSM4	— r6i1p1_null_CSIRO-Mk3-6-0	— r1i1p1_null_GISS-E2-H-CC	— r1i1p1_null_MPI-ESM-LR
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— r1i1p1_null CESM1-CAM5	— r1i1p1_null_CanESM2	— r1i1p1_null_GISS-E2-R-CC	— r1i1p1_null_MRI-CGCM3
— r2i1p1_null CESM1-CAM5	— r2i1p1_null_CanESM2	— r1i1p1_null_GISS-E2-R	— r1i1p1_null_NorESM1-ME
— r1i1p1_null CMCC-CESM	— r3i1p1_null_CanESM2	— r1i1p2_null_GISS-E2-R	— r1i1p1_null_NorESM1-M

TAS - CMIP6 Historical and SSP585



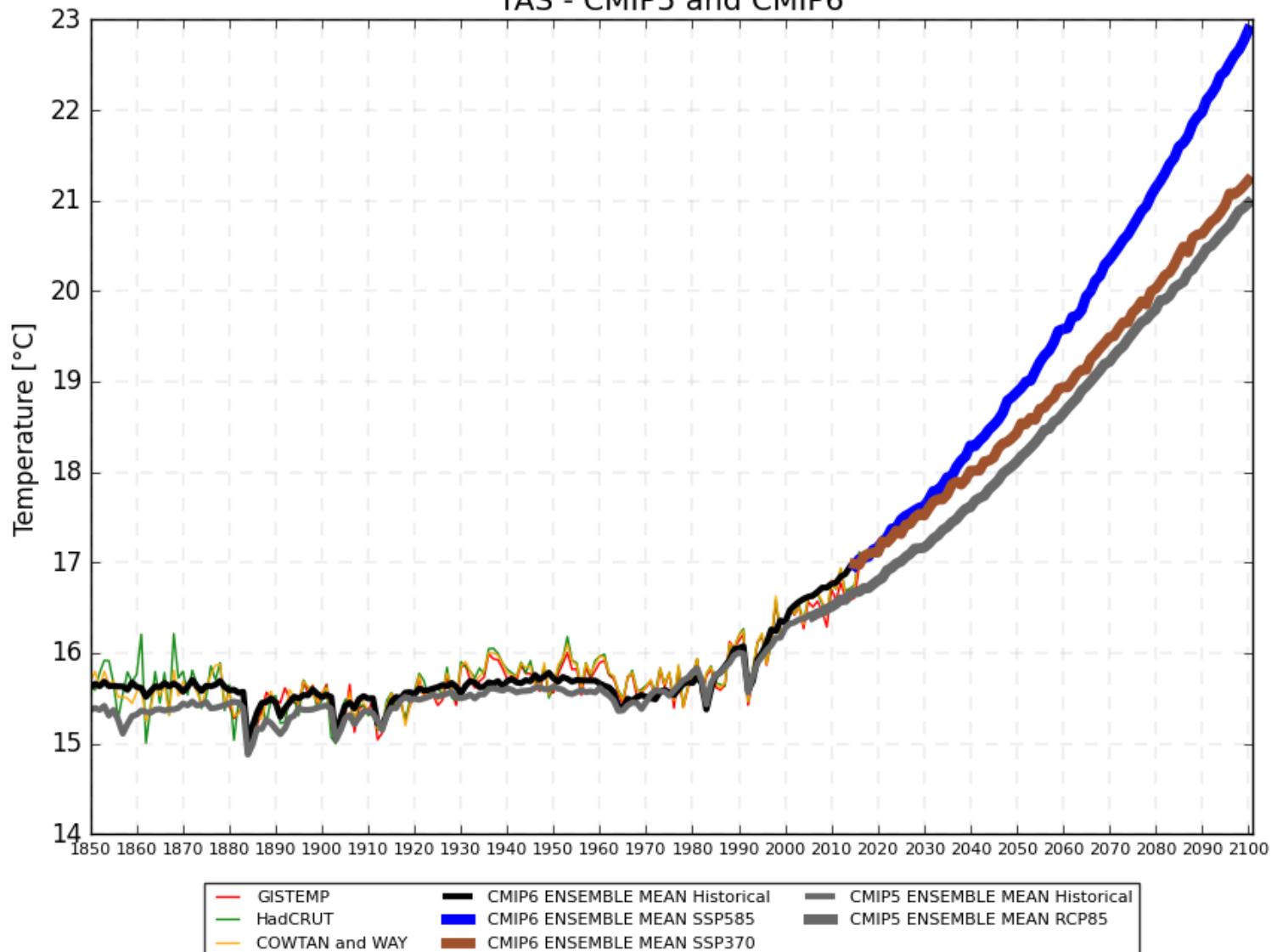
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COWTAN and WAY	r1i1p1f2_gr_CNRM-ESM2-1	r1i1p1f1_gn_FIO-ESM-2-0	r1i1p1f1_gn_MIROC6
CMIP6 ENSEMBLE MEAN Historical	r1i1p2f1_gn_CanesM5-CanOE	r1i1p1f1_gr1_GFDL-CM4	r1i1p1f1_gn_MPI-ESM1-2-HR
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r1i1p1f1_gn_ACCESS-ESM1-5	r2i1p1f1_gn_CanesM5	r1i1p1f3_gn_HadGEM3-GC31-LL	r1i1p1f1_gn_MPI-ESM2-0
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TAS - CMIP6 Historical and SSP370



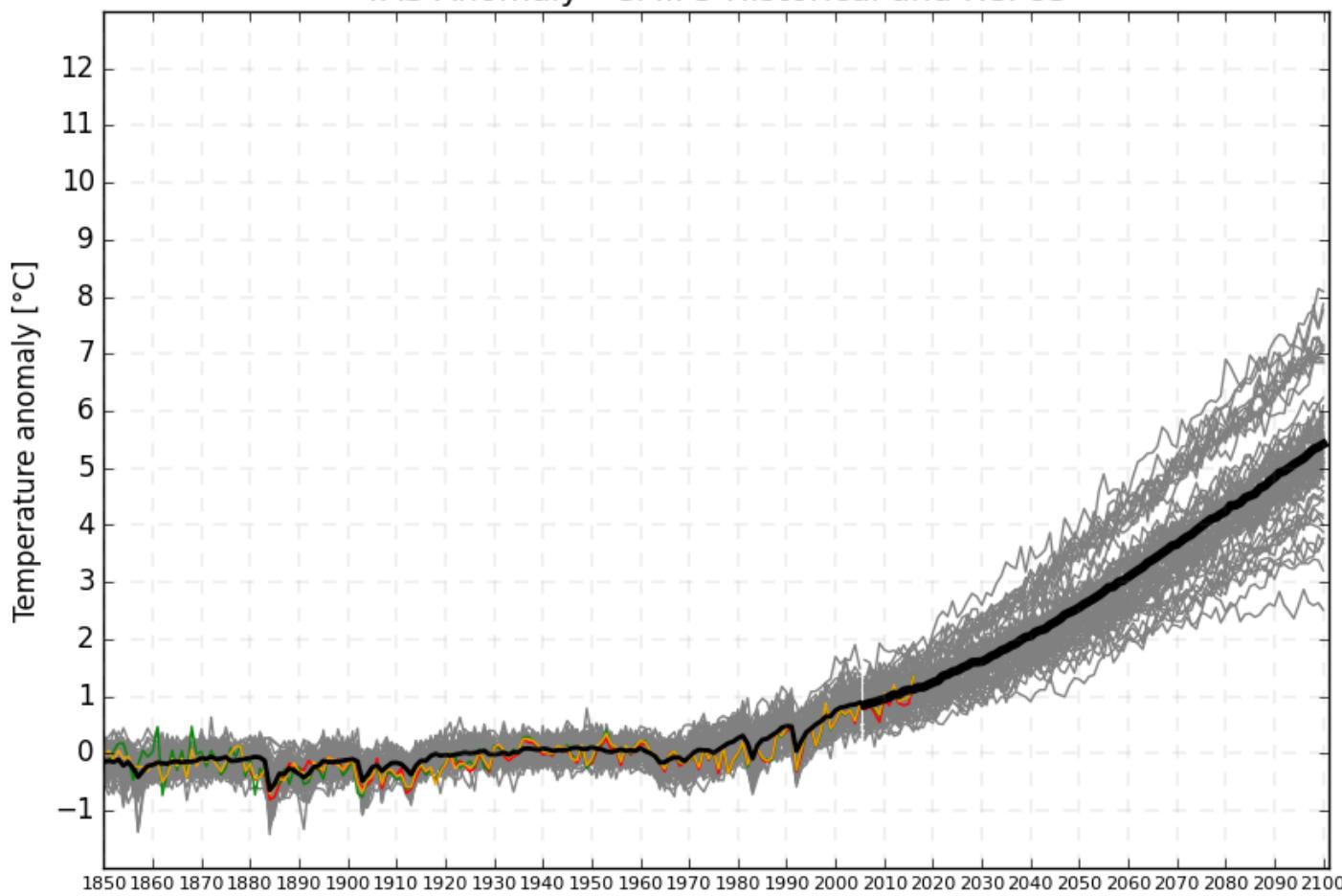
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COWTAN and WAY	r1i1p1f1_gn_CanESM5	r1i1p1f1_gr1_GFDL-ESM4	r2i1p1f1_gn_MPI-ESM1-2-LR
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r1i1p1f1_gn_ACCESS-ESM1-5	r1i1p1f1_gr_EC-Earth3	r1i1p1f2_gr_MCM-UA-1-0	r1i1p1f1_gn_NorESM2-MM
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TAS - CMIP5 and CMIP6



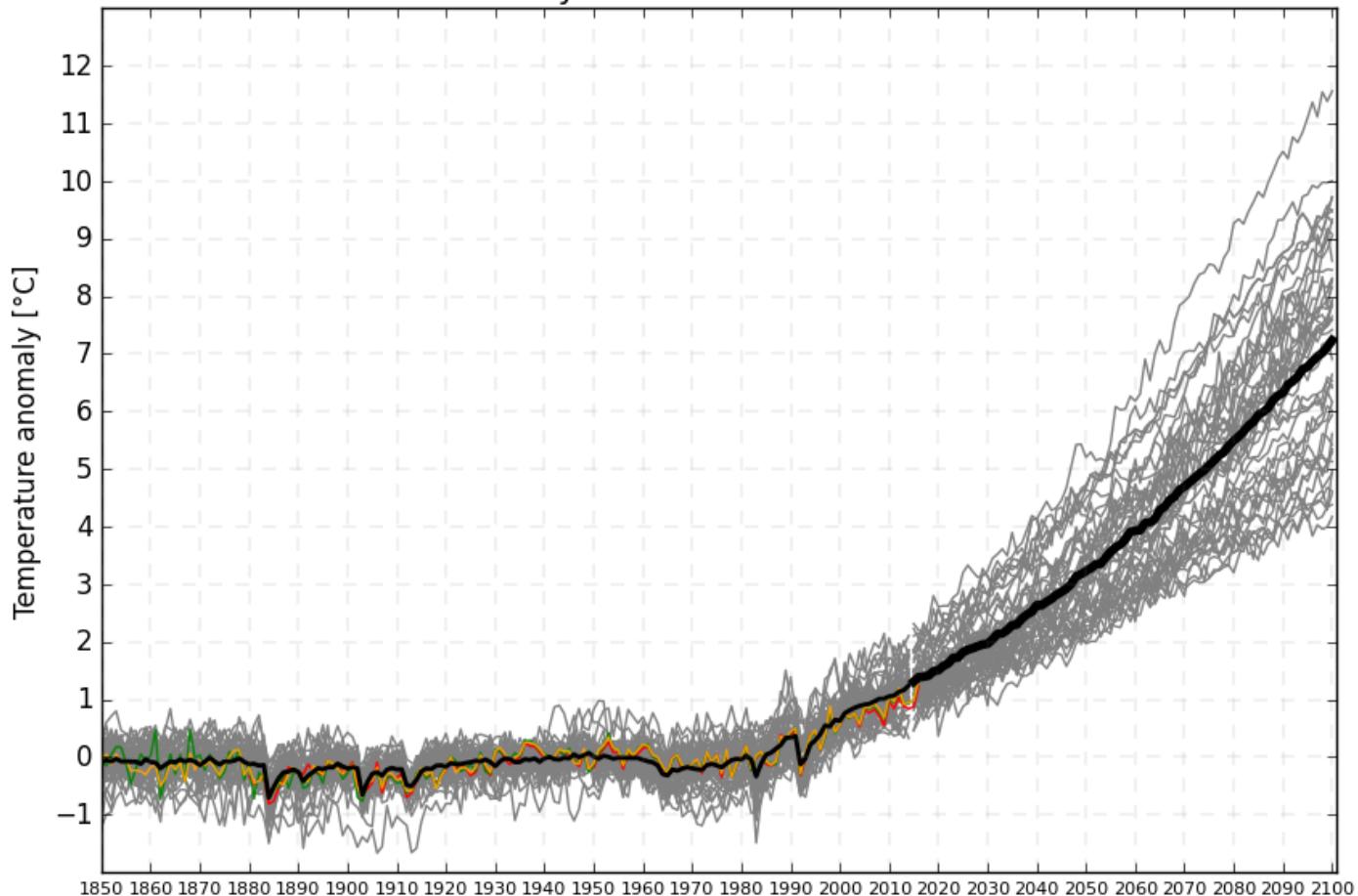
3. Temperature anomaly

TAS Anomaly - CMIP5 Historical and RCP85



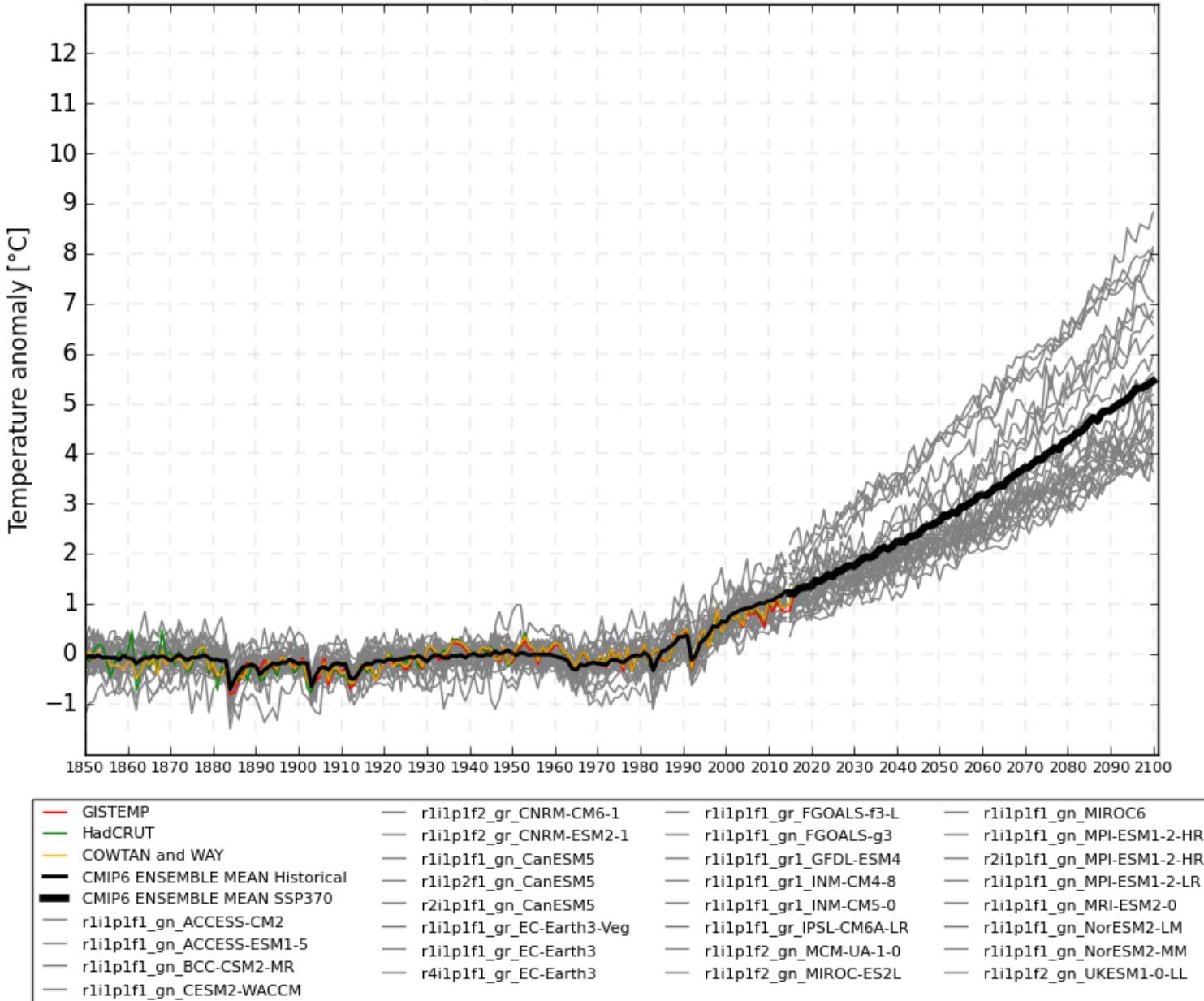
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— HadCRUT	— r1i1p1_null_CMCC-CM	— r5i1p1_null_CanESM2	— r1i1p1_null_INMCM4
— COWTAN and WAY	— r10i1p1_null_CNRM-CM5	— r11i1p1_null_EC-EARTH	— r1i1p1_null_IPSL-CM5A-LR
— CMIP5 ENSEMBLE MEAN Historical	— r1i1p1_null_CNRM-CM5	— r12i1p1_null_EC-EARTH	— r2i1p1_null_IPSL-CM5A-LR
— CMIP5 ENSEMBLE MEAN RCP85	— r2i1p1_null_CNRM-CM5	— r13i1p1_null_EC-EARTH	— r3i1p1_null_IPSL-CM5A-LR
— r1i1p1_null_ACCESS1-0	— r4i1p1_null_CNRM-CM5	— r1i1p1_null_EC-EARTH	— r4i1p1_null_IPSL-CM5A-LR
— r1i1p1_null_ACCESS1-3	— r6i1p1_null_CNRM-CM5	— r2i1p1_null_EC-EARTH	— r1i1p1_null_IPSL-CM5A-MR
— r1i1p1_null_BCC-CSM1-1-M	— r10i1p1_null_CSIRO-Mk3-6-0	— r8i1p1_null_EC-EARTH	— r1i1p1_null_IPSL-CM5B-LR
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— r1i1p1_null_BNU-ESM	— r2i1p1_null_CSIRO-Mk3-6-0	— r1i1p1_null_FGOALS-g2	— r1i1p1_null_MIROC-ESM
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— r2i1p1_null_CCSM4	— r4i1p1_null_CSIRO-Mk3-6-0	— r2i1p1_null_FIO-ESM	— r2i1p1_null_MIROC5
— r3i1p1_null_CCSM4	— r5i1p1_null_CSIRO-Mk3-6-0	— r3i1p1_null_FIO-ESM	— r3i1p1_null_MIROC5
— r4i1p1_null_CCSM4	— r6i1p1_null_CSIRO-Mk3-6-0	— r1i1p1_null_GISS-E2-H-CC	— r1i1p1_null_MPI-ESM-LR
— r5i1p1_null_CCSM4	— r7i1p1_null_CSIRO-Mk3-6-0	— r1i1p1_null_GISS-E2-H	— r2i1p1_null_MPI-ESM-LR
— r6i1p1_null_CCSM4	— r8i1p1_null_CSIRO-Mk3-6-0	— r1i1p2_null_GISS-E2-H	— r3i1p1_null_MPI-ESM-LR
— r1i1p1_null_CESM1-BGC	— r9i1p1_null_CSIRO-Mk3-6-0	— r1i1p3_null_GISS-E2-H	— r1i1p1_null_MPI-ESM-MR
— r1i1p1_null_CESM1-CAM5	— r1i1p1_null_CanESM2	— r1i1p1_null_GISS-E2-R-CC	— r1i1p1_null_MRI-CGCM3
— r2i1p1_null_CESM1-CAM5	— r2i1p1_null_CanESM2	— r1i1p1_null_GISS-E2-R	— r1i1p1_null_NorESM1-ME
— r1i1p1_null_CMCC-CESM	— r3i1p1_null_CanESM2	— r1i1p2_null_GISS-E2-R	— r1i1p1_null_NorESM1-M

TAS Anomaly - CMIP6 Historical and SSP585

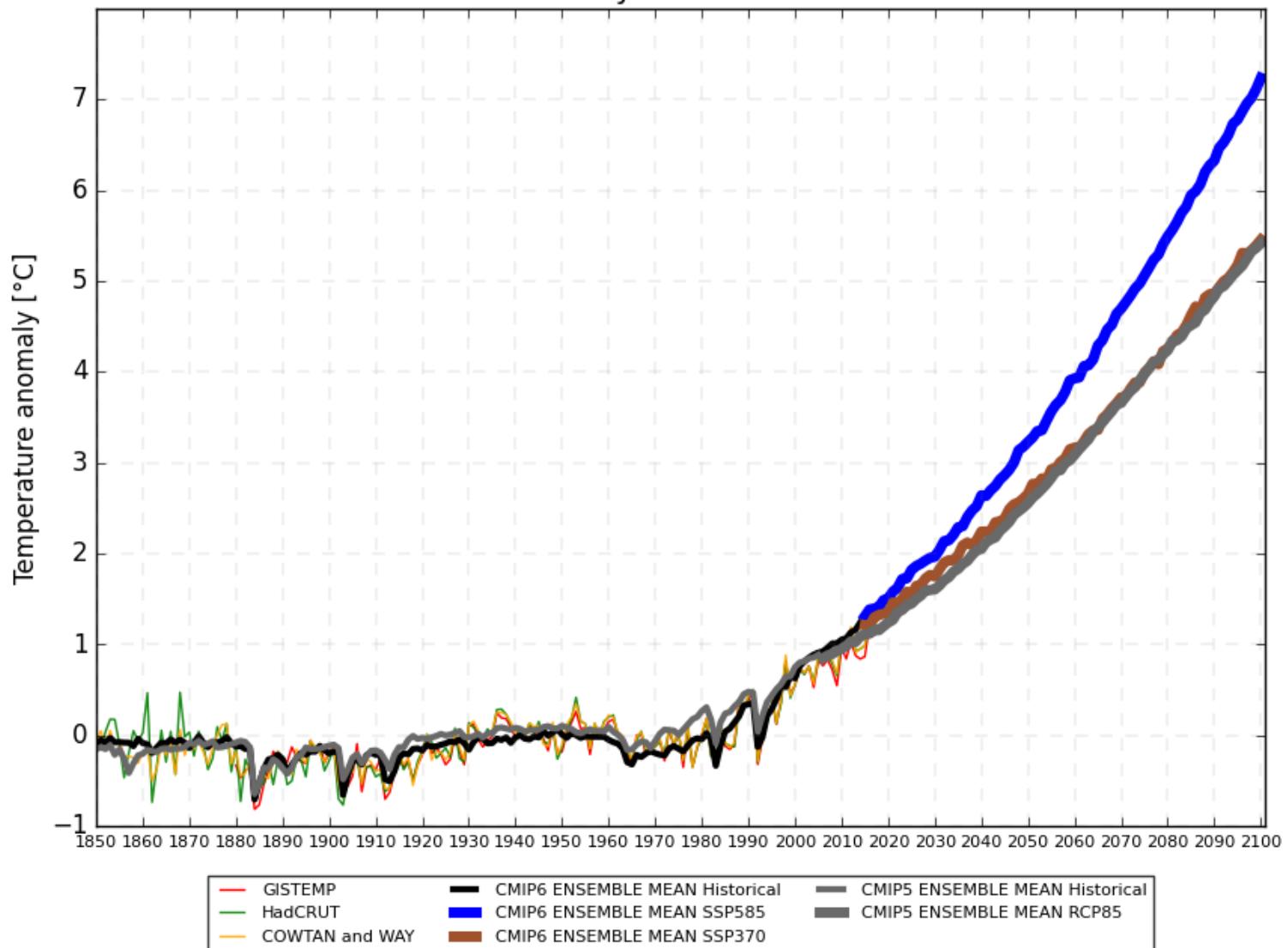


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HadCRUT	r1i1p1f2_gr_CNRM-CM6-1	r1i1p1f1_gn_FGOALS-g3	r1i1p1f2_gn_MIROC-ES2L
COWTAN and WAY	r1i1p1f2_gr_CNRM-ESM2-1	r1i1p1f1_gn_FIO-ESM-2-0	r1i1p1f1_gn_MIROC6
CMIP6 ENSEMBLE MEAN Historical	r1i1p1f1_gn_CanESM5-CanOE	r1i1p1f1_gnl_GFDL-CM4	r1i1p1f1_gn_MPI-ESM1-2-HR
CMIP6 ENSEMBLE MEAN SSP585	r1i1p1f1_gn_CanESM5	r1i1p1f1_grl_GFDL-ESM4	r2i1p1f1_gn_MPI-ESM1-2-HR
r1i1p1f1_gn_ACCESS-CM2	r1i1p1f1_gn_CanESM5	r1i1p1f1_gn_GISS-E2-1-G	r1i1p1f1_gn_MPI-ESM1-2-LR
r1i1p1f1_gn_ACCESS-ESM1-5	r1i1p2f1_gn_CanESM5	r1i1p1f3_gn_HadGEM3-GC31-LL	r1i1p1f1_gn_MRI-ESM2-0
r1i1p1f1_gn_AWI-CM-1-1-MR	r1i1p1f1_gr_E3SM-1-1	r1i1p1f3_gn_HadGEM3-GC31-MM	r1i1p1f1_gn_NESM3
r1i1p1f1_gn_BCC-CSM2-MR	r1i1p1f1_gr_EC-Earth3-CC	r1i1p1f1_grl_INM-CM4-8	r1i1p1f1_gn_NorESM2-LM
r1i1p1f1_gn_CAS-ESM2-0	r1i1p1f1_gr_EC-Earth3-Veg-LR	r1i1p1f1_grl_INM-CM5-0	r1i1p1f1_gn_NorESM2-MM
r1i1p1f1_gn CESM2-WACCM	r1i1p1f1_gr_EC-Earth3-Veg	r1i1p1f1_gr_IPSL-CM6A-LR	r1i1p1f1_gn_TaiESM1
r1i1p1f1_gn CESM2	r1i1p1f1_gr_EC-Earth3	r1i1p1f1_gr_KACE-1-0-G	r1i1p1f2_gn_UKESM1-0-LL
r1i1p1f1_gn_CMCC-CM2-SR5	r4i1p1f1_gr_EC-Earth3	r1i1p1f1_grl_KIOT-ESM	

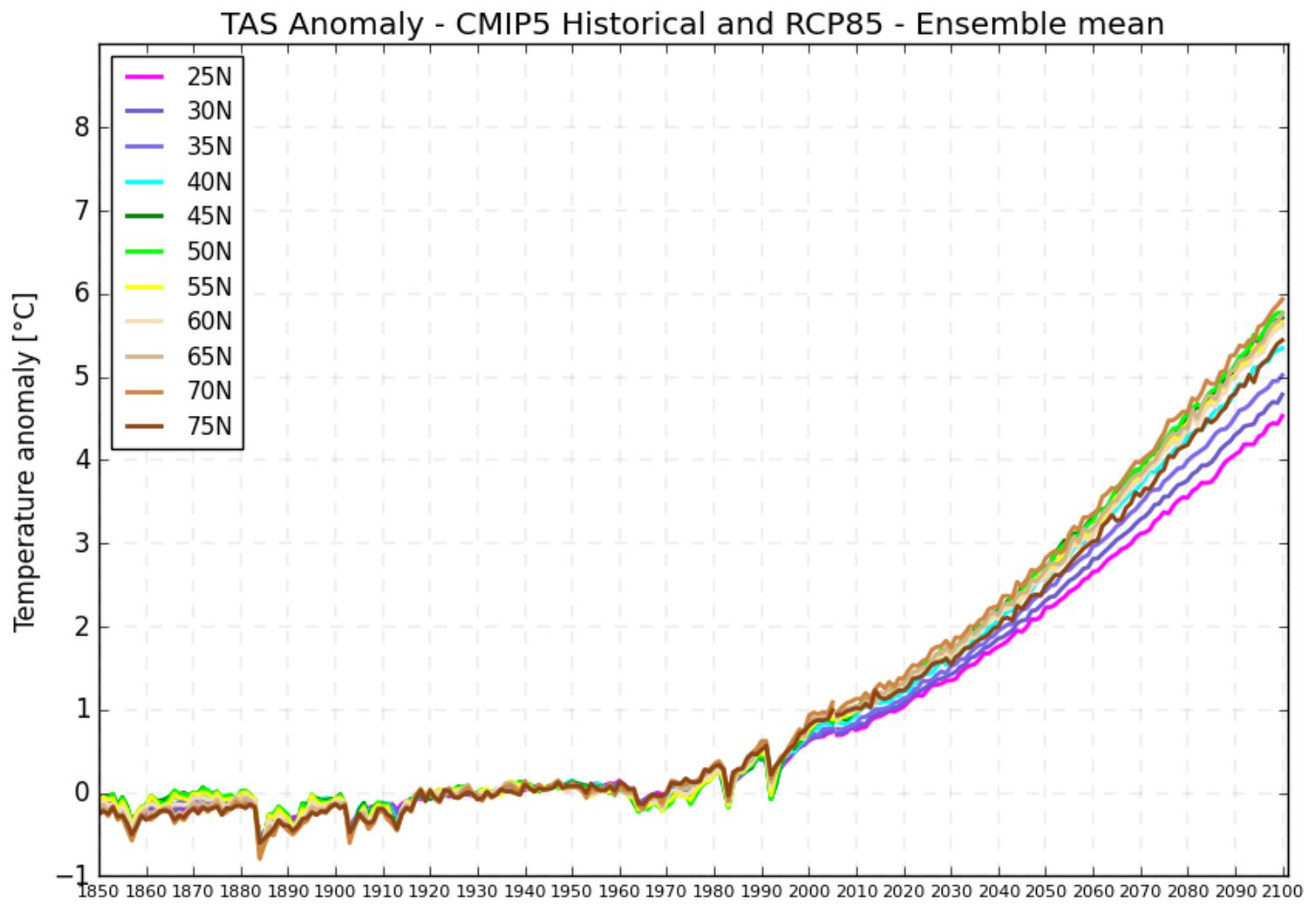
TAS Anomaly - CMIP6 Historical and SSP370



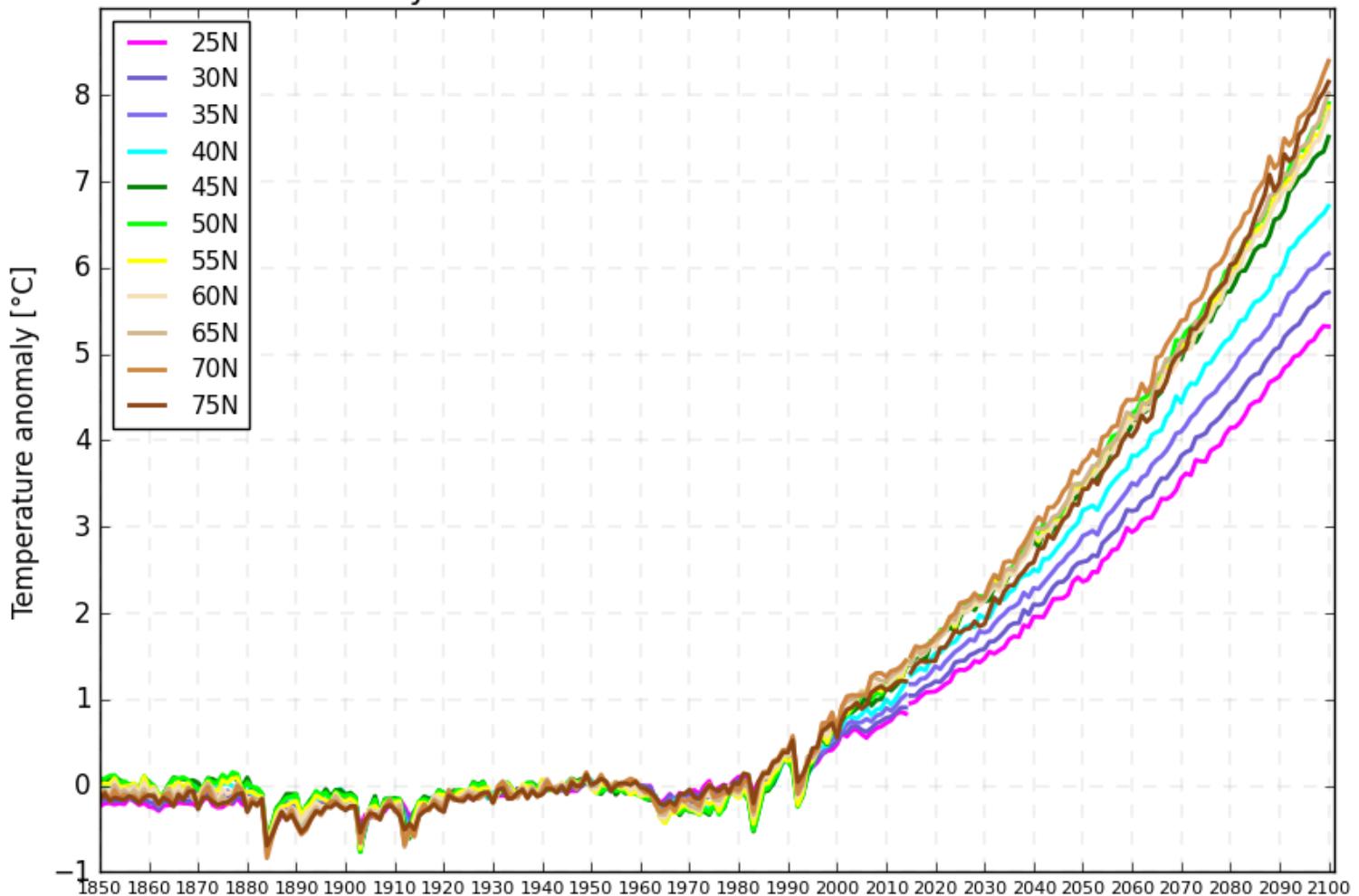
TAS Anomaly - CMIP5 and CMIP6



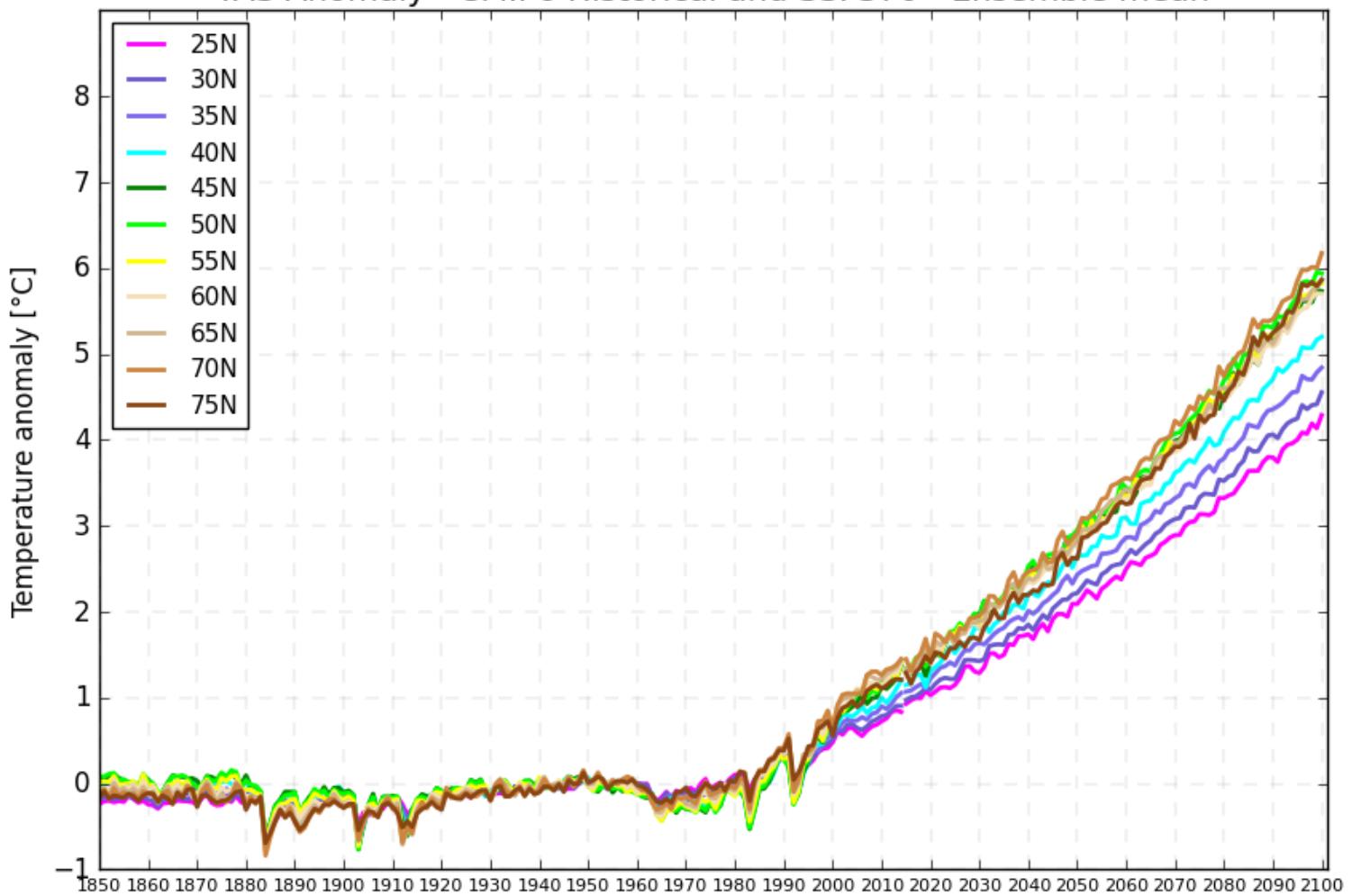
4. Temperature anomaly by latitude and Arctic amplification



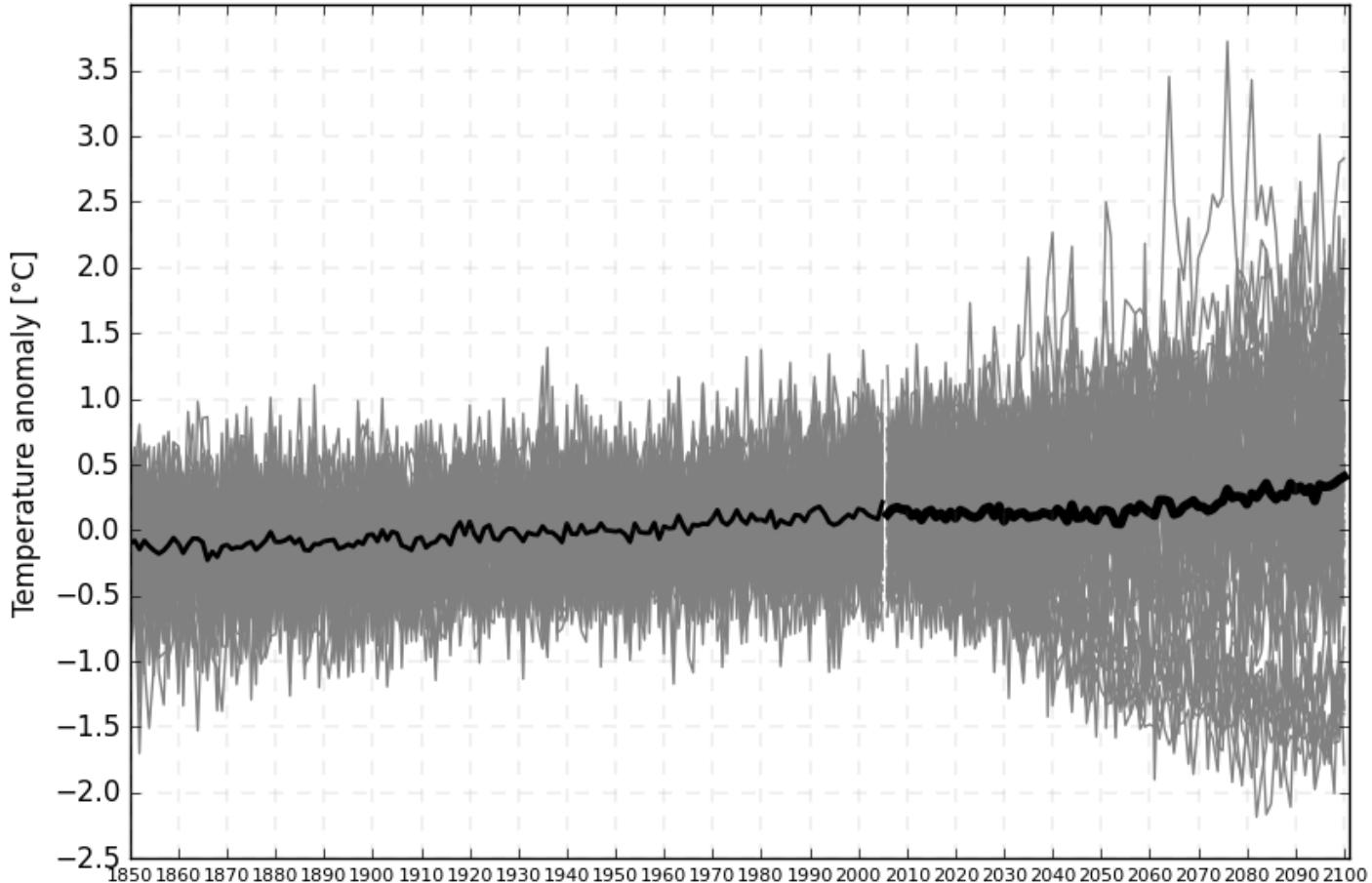
TAS Anomaly - CMIP6 Historical and SSP585 - Ensemble mean



TAS Anomaly - CMIP6 Historical and SSP370 - Ensemble mean

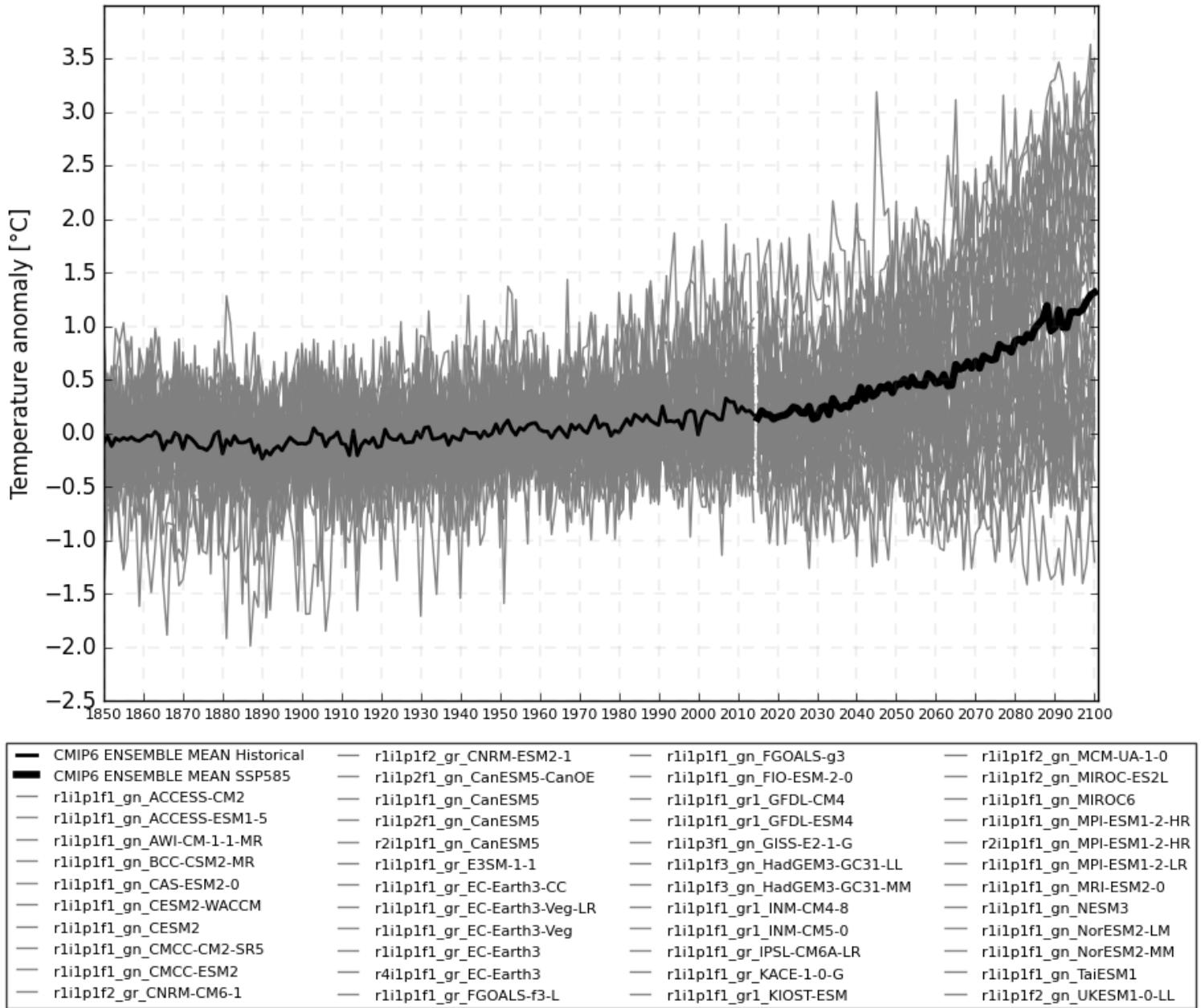


TAS Arctic amplification - High (65-75N) minus Mid (25-60N)
CMIP5 Historical and RCP85

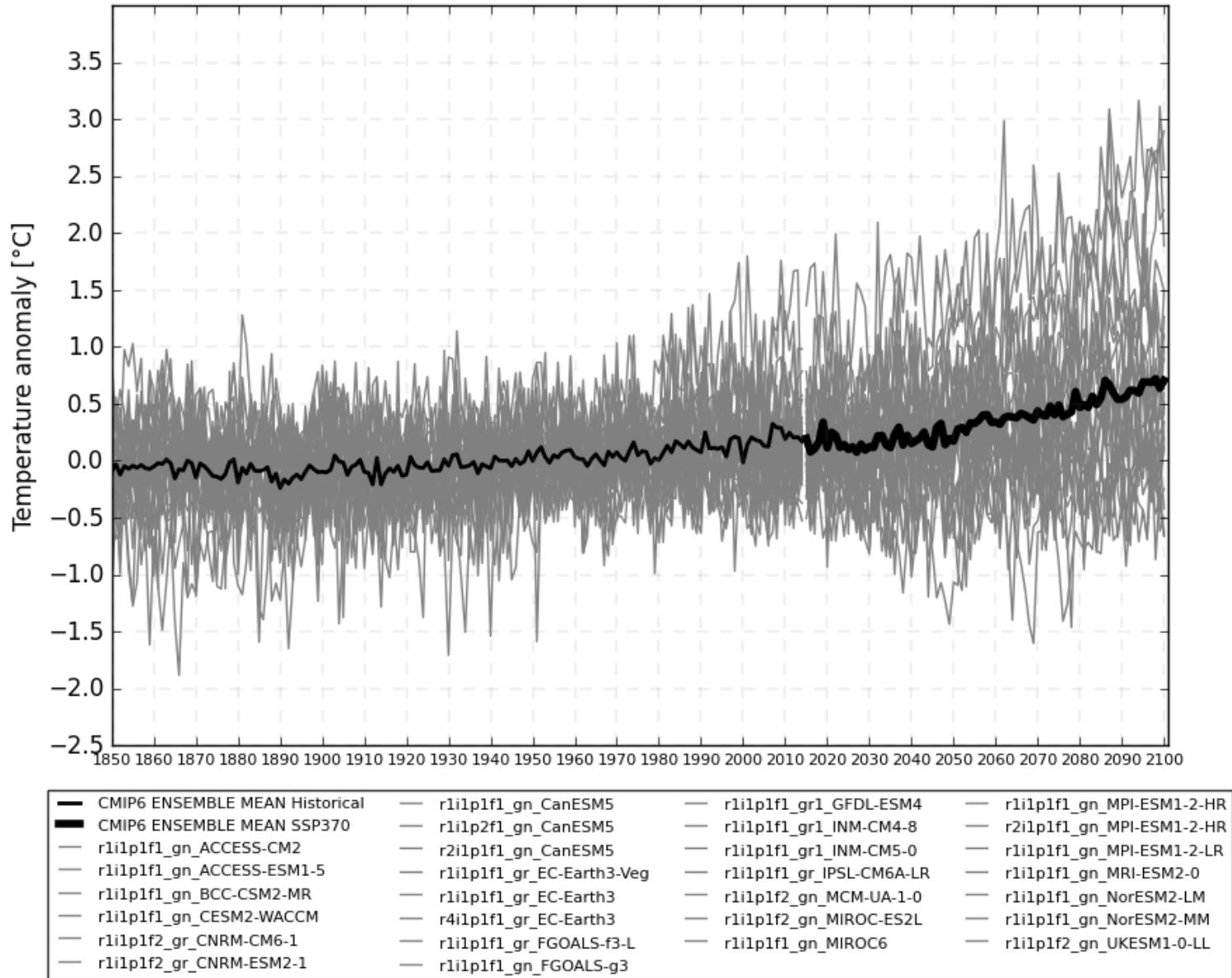


— CMIP5 ENSEMBLE MEAN Historical	— r1i1p1_null_CNRM-CM5	— r1i1p1_null_EC-EARTH	— r1i1p1_null_INMCM4
— CMIP5 ENSEMBLE MEAN RCP85	— r2i1p1_null_CNRM-CM5	— r12i1p1_null_EC-EARTH	— r1i1p1_null_IPSL-CM5A-LR
— r1i1p1_null_ACCESS1-0	— r4i1p1_null_CNRM-CM5	— r13i1p1_null_EC-EARTH	— r2i1p1_null_IPSL-CM5A-LR
— r1i1p1_null_ACCESS1-3	— r6i1p1_null_CNRM-CM5	— r1i1p1_null_EC-EARTH	— r3i1p1_null_IPSL-CM5A-LR
— r1i1p1_null_BCC-CSM1-1-M	— r10i1p1_null_CSIRO-Mk3-6-0	— r2i1p1_null_EC-EARTH	— r4i1p1_null_IPSL-CM5A-LR
— r1i1p1_null_BCC-CSM1-1	— r1i1p1_null_CSIRO-Mk3-6-0	— r8i1p1_null_EC-EARTH	— r1i1p1_null_IPSL-CM5A-MR
— r1i1p1_null_BNU-ESM	— r2i1p1_null_CSIRO-Mk3-6-0	— r9i1p1_null_EC-EARTH	— r1i1p1_null_IPSL-CM5B-LR
— r1i1p1_null_CCSM4	— r3i1p1_null_CSIRO-Mk3-6-0	— r1i1p1_null_FGOALS-g2	— r1i1p1_null_MIROC-ESM-CHEM
— r2i1p1_null_CCSM4	— r4i1p1_null_CSIRO-Mk3-6-0	— r1i1p1_null_FIO-ESM	— r1i1p1_null_MIROC-ESM
— r3i1p1_null_CCSM4	— r5i1p1_null_CSIRO-Mk3-6-0	— r2i1p1_null_FIO-ESM	— r1i1p1_null_MIROC5
— r4i1p1_null_CCSM4	— r6i1p1_null_CSIRO-Mk3-6-0	— r3i1p1_null_FIO-ESM	— r2i1p1_null_MIROC5
— r5i1p1_null_CCSM4	— r7i1p1_null_CSIRO-Mk3-6-0	— r1i1p1_null_GISS-E2-H-CC	— r3i1p1_null_MIROC5
— r6i1p1_null_CCSM4	— r8i1p1_null_CSIRO-Mk3-6-0	— r1i1p1_null_GISS-E2-H	— r1i1p1_null_MPI-ESM-LR
— r1i1p1_null_CESM1-BGC	— r9i1p1_null_CSIRO-Mk3-6-0	— r1i1p2_null_GISS-E2-H	— r2i1p1_null_MPI-ESM-LR
— r1i1p1_null_CESM1-CAM5	— r1i1p1_null_CanESM2	— r1i1p3_null_GISS-E2-H	— r3i1p1_null_MPI-ESM-LR
— r2i1p1_null_CESM1-CAM5	— r2i1p1_null_CanESM2	— r1i1p1_null_GISS-E2-R-CC	— r1i1p1_null_MPI-ESM-MR
— r1i1p1_null_CMCC-CESM	— r3i1p1_null_CanESM2	— r1i1p1_null_GISS-E2-R	— r1i1p1_null_MRI-CGCM3
— r1i1p1_null_CMCC-CMS	— r4i1p1_null_CanESM2	— r1i1p2_null_GISS-E2-R	— r1i1p1_null_NorESM1-ME
— r1i1p1_null_CMCC-CM	— r5i1p1_null_CanESM2	— r1i1p3_null_GISS-E2-R	— r1i1p1_null_NorESM1-M
— r10i1p1_null_CNRM-CM5			

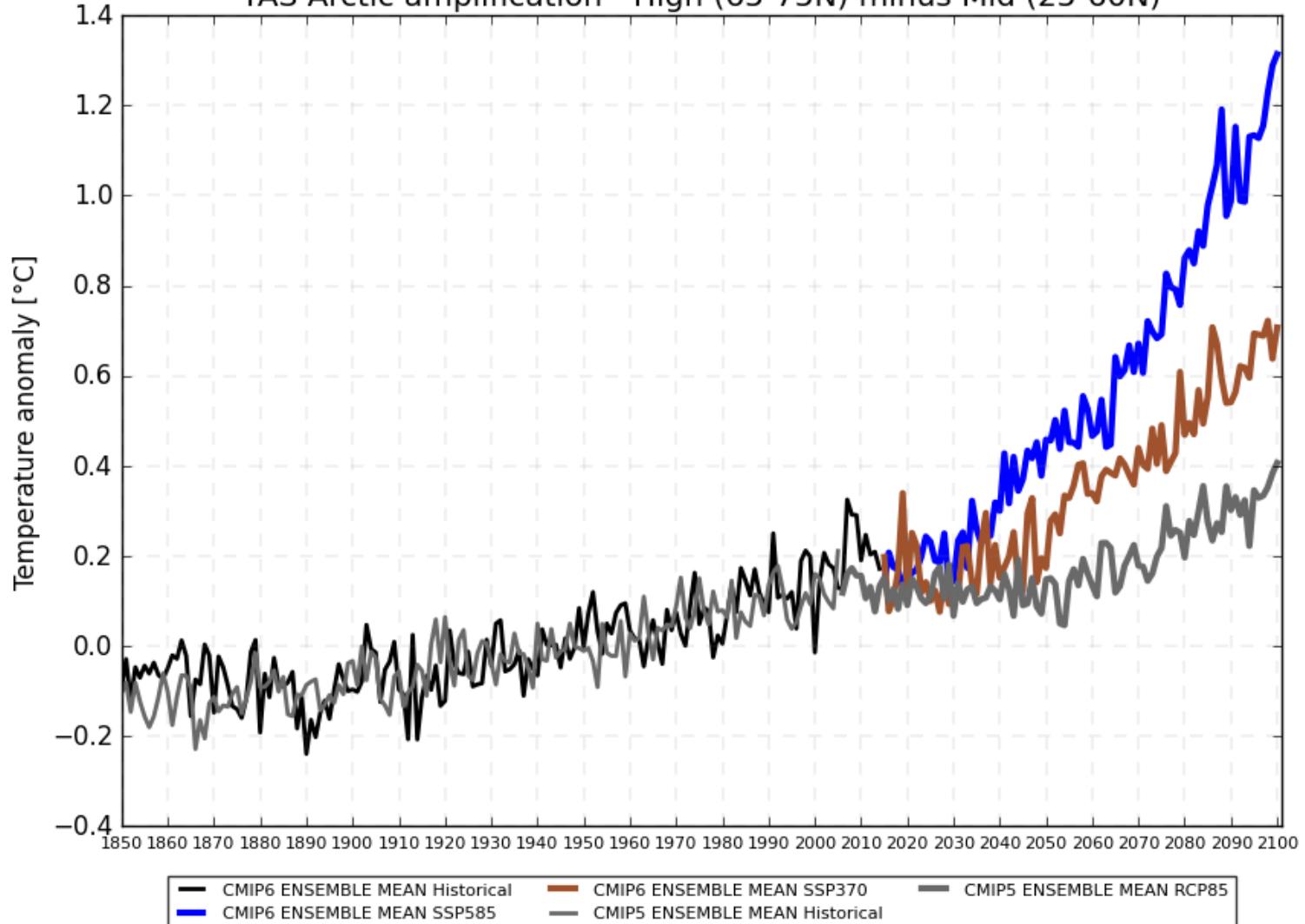
TAS Arctic amplification - High (65-75N) minus Mid (25-60N)
CMIP6 Historical and SSP585



TAS Arctic amplification - High (65-75N) minus Mid (25-60N)
CMIP6 Historical and SSP370

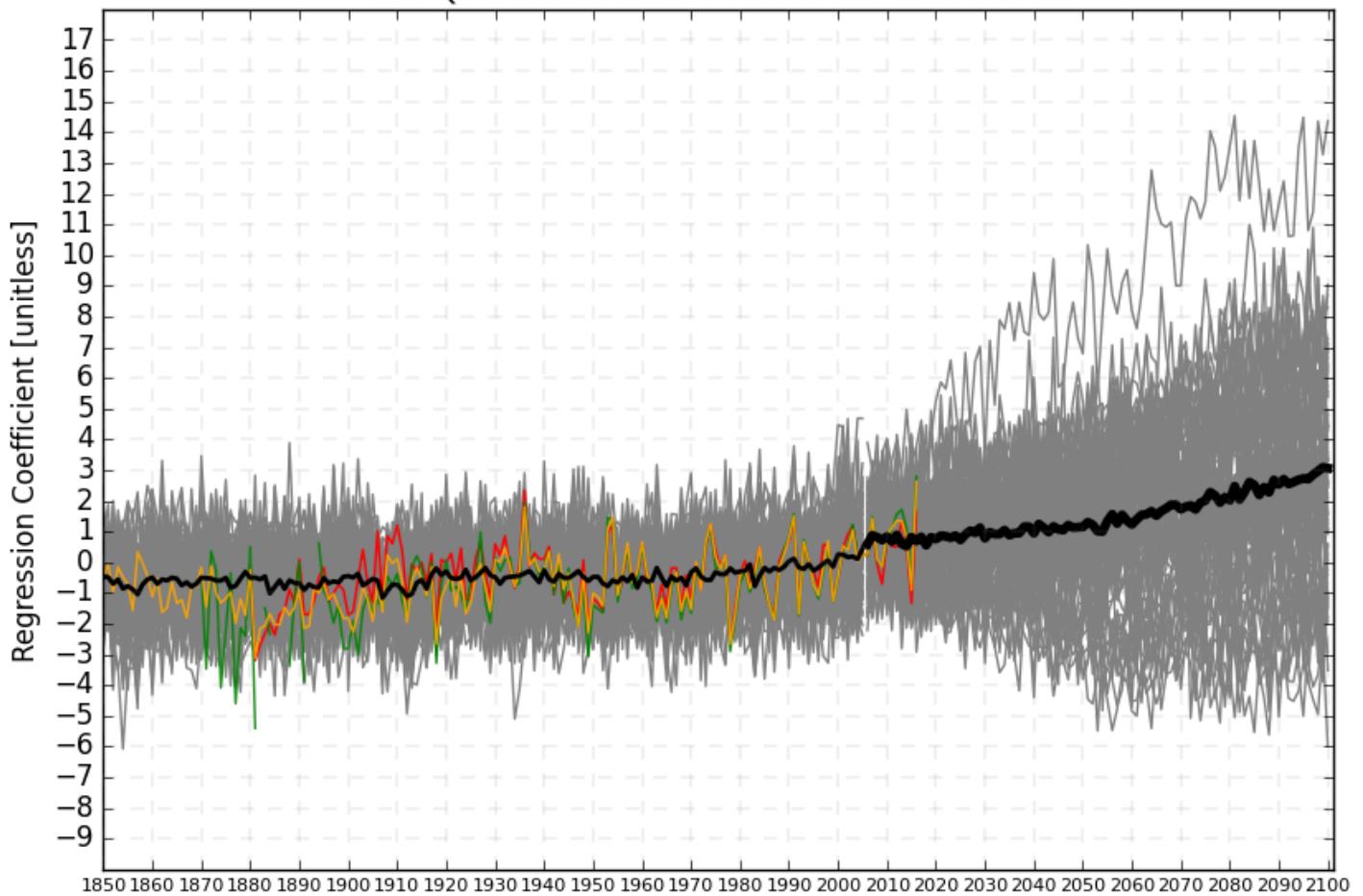


TAS Arctic amplification - High (65-75N) minus Mid (25-60N)



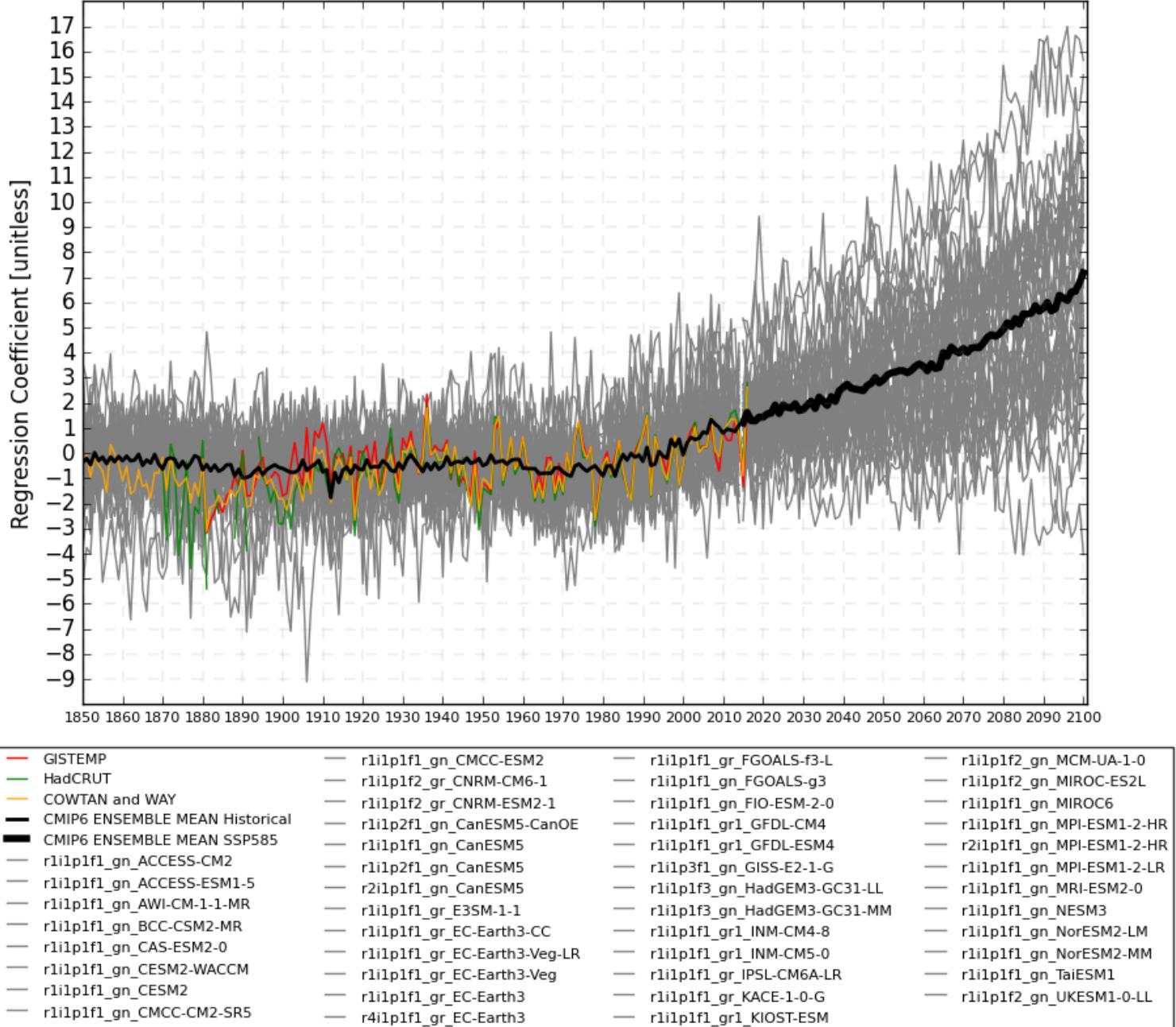
5. Temperature QRA index (not rescaled)

TAS QRA Index CMIP5 Historical and RCP85

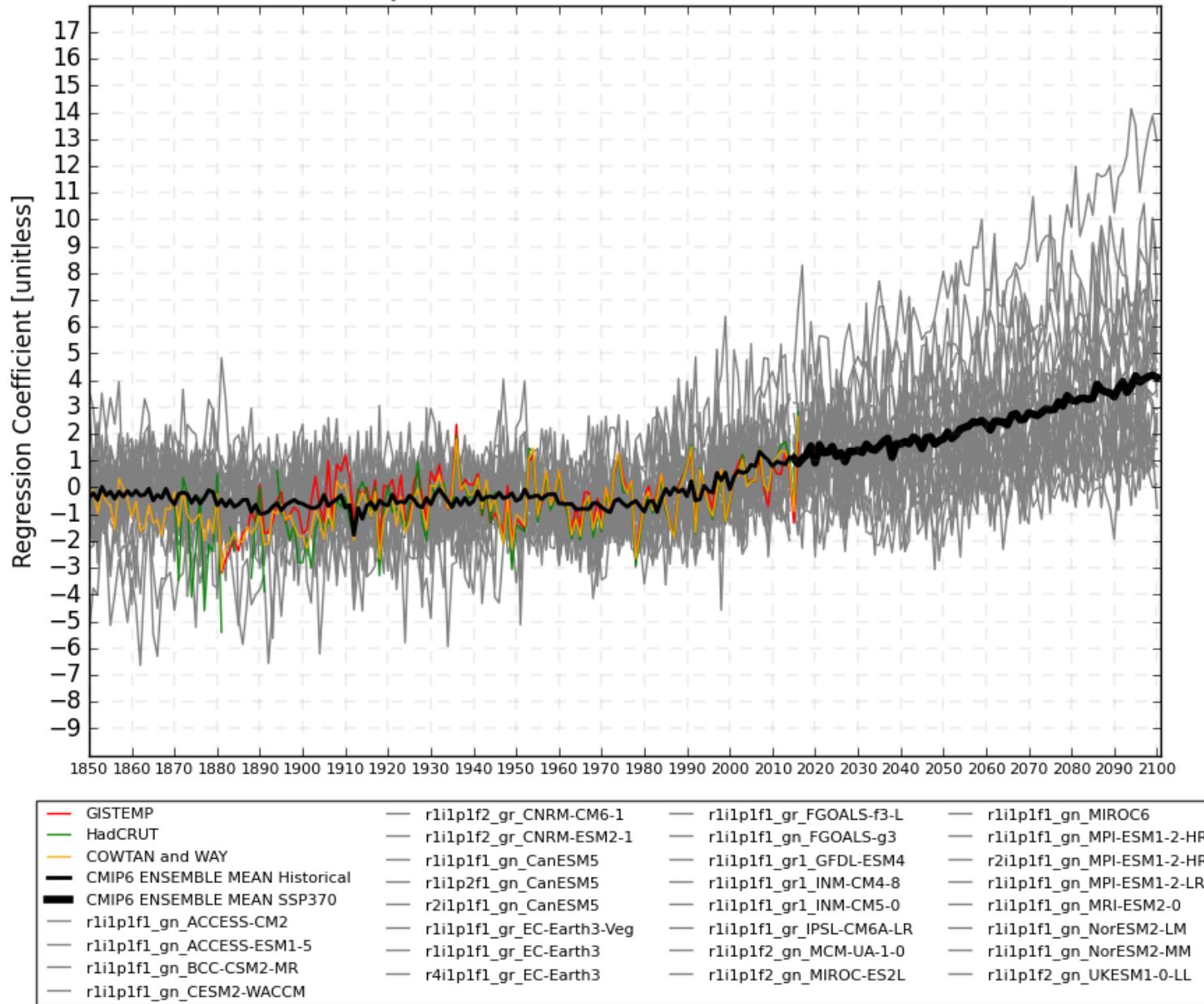


— GISTEMP	— r1i1p1_null_CMCC-CMS	— r4i1p1_null_CanESM2	— r1i1p3_null_GISS-E2-R
— HadCRUT	— r1i1p1_null_CMCC-CM	— r5i1p1_null_CanESM2	— r1i1p1_null_INMCM4
— COWTAN and WAY	— r10i1p1_null_CNRM-CM5	— r11i1p1_null_EC-EARTH	— r1i1p1_null_IPSL-CM5A-LR
— CMIP5 ENSEMBLE MEAN Historical	— r1i1p1_null_CNRM-CM5	— r12i1p1_null_EC-EARTH	— r2i1p1_null_IPSL-CM5A-LR
— CMIP5 ENSEMBLE MEAN RCP85	— r2i1p1_null_CNRM-CM5	— r13i1p1_null_EC-EARTH	— r3i1p1_null_IPSL-CM5A-LR
— r1i1p1_null_ACCESS1-0	— r4i1p1_null_CNRM-CM5	— r1i1p1_null_EC-EARTH	— r4i1p1_null_IPSL-CM5A-LR
— r1i1p1_null_ACCESS1-3	— r6i1p1_null_CNRM-CM5	— r2i1p1_null_EC-EARTH	— r1i1p1_null_IPSL-CM5A-MR
— r1i1p1_null_BCC-CSM1-1-M	— r10i1p1_null_CSIRO-Mk3-6-0	— r8i1p1_null_EC-EARTH	— r1i1p1_null_IPSL-CM5B-LR
— r1i1p1_null_BCC-CSM1-1	— r1i1p1_null_CSIRO-Mk3-6-0	— r9i1p1_null_EC-EARTH	— r1i1p1_null_MIROC-ESM-CHEM
— r1i1p1_null_BNU-ESM	— r2i1p1_null_CSIRO-Mk3-6-0	— r1i1p1_null_FGOALS-g2	— r1i1p1_null_MIROC-ESM
— r1i1p1_null CCSM4	— r3i1p1_null_CSIRO-Mk3-6-0	— r1i1p1_null_FIO-ESM	— r1i1p1_null_MIROC5
— r2i1p1_null CCSM4	— r4i1p1_null_CSIRO-Mk3-6-0	— r2i1p1_null_FIO-ESM	— r2i1p1_null_MIROC5
— r3i1p1_null CCSM4	— r5i1p1_null_CSIRO-Mk3-6-0	— r3i1p1_null_FIO-ESM	— r3i1p1_null_MIROC5
— r4i1p1_null CCSM4	— r6i1p1_null_CSIRO-Mk3-6-0	— r1i1p1_null_GISS-E2-H-CC	— r1i1p1_null_MPI-ESM-LR
— r5i1p1_null CCSM4	— r7i1p1_null_CSIRO-Mk3-6-0	— r1i1p1_null_GISS-E2-H	— r2i1p1_null_MPI-ESM-LR
— r6i1p1_null CCSM4	— r8i1p1_null_CSIRO-Mk3-6-0	— r1i1p2_null_GISS-E2-H	— r3i1p1_null_MPI-ESM-LR
— r1i1p1_null CESM1-BGC	— r9i1p1_null_CSIRO-Mk3-6-0	— r1i1p3_null_GISS-E2-H	— r1i1p1_null_MPI-ESM-MR
— r1i1p1_null CESM1-CAM5	— r1i1p1_null_CanESM2	— r1i1p1_null_GISS-E2-R-CC	— r1i1p1_null_MRI-CGCM3
— r2i1p1_null CESM1-CAM5	— r2i1p1_null_CanESM2	— r1i1p1_null_GISS-E2-R	— r1i1p1_null_NorESM1-ME
— r1i1p1_null CMCC-CESM	— r3i1p1_null_CanESM2	— r1i1p2_null_GISS-E2-R	— r1i1p1_null_NorESM1-M

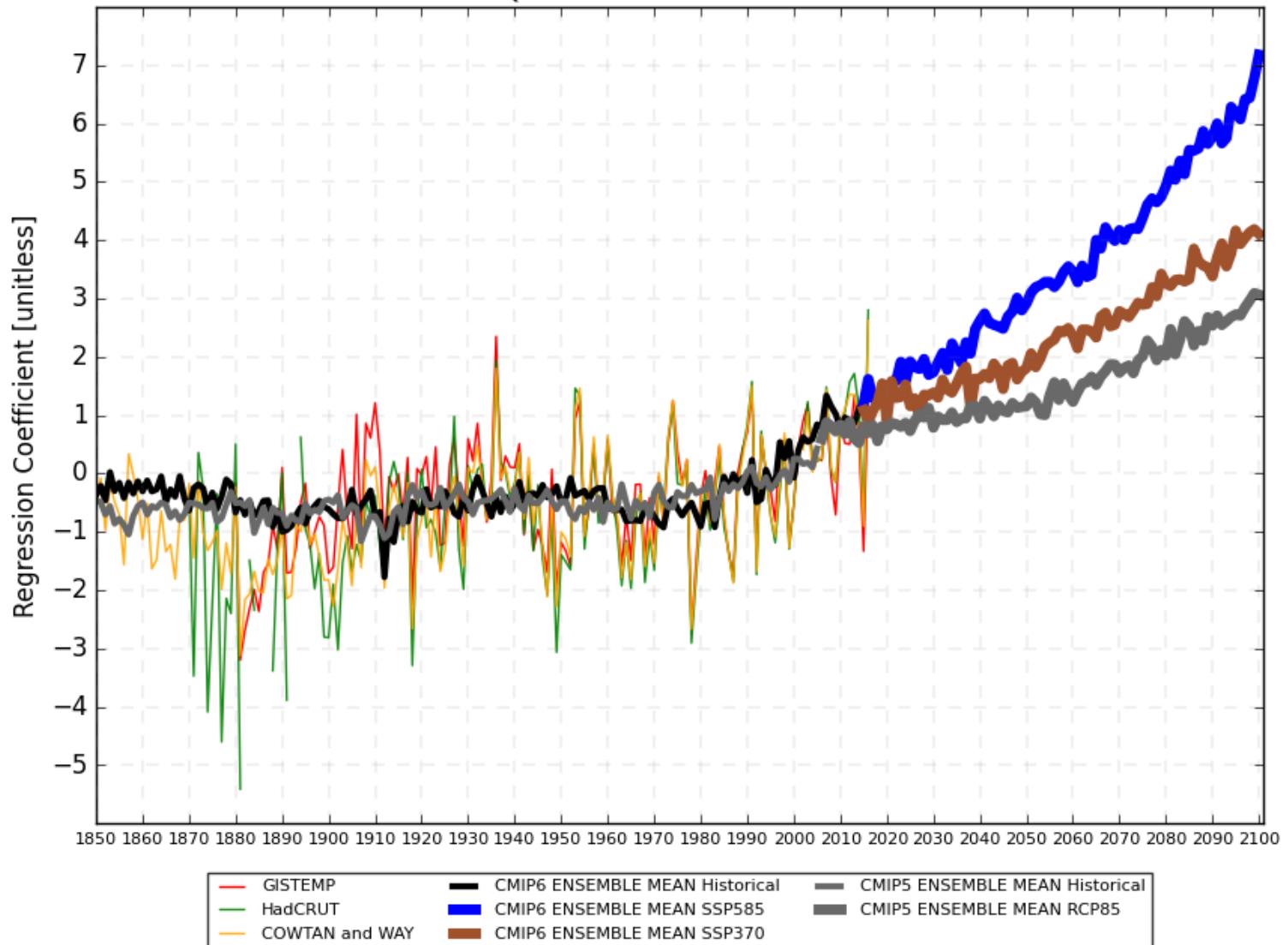
TAS QRA Index CMIP6 Historical and SSP585



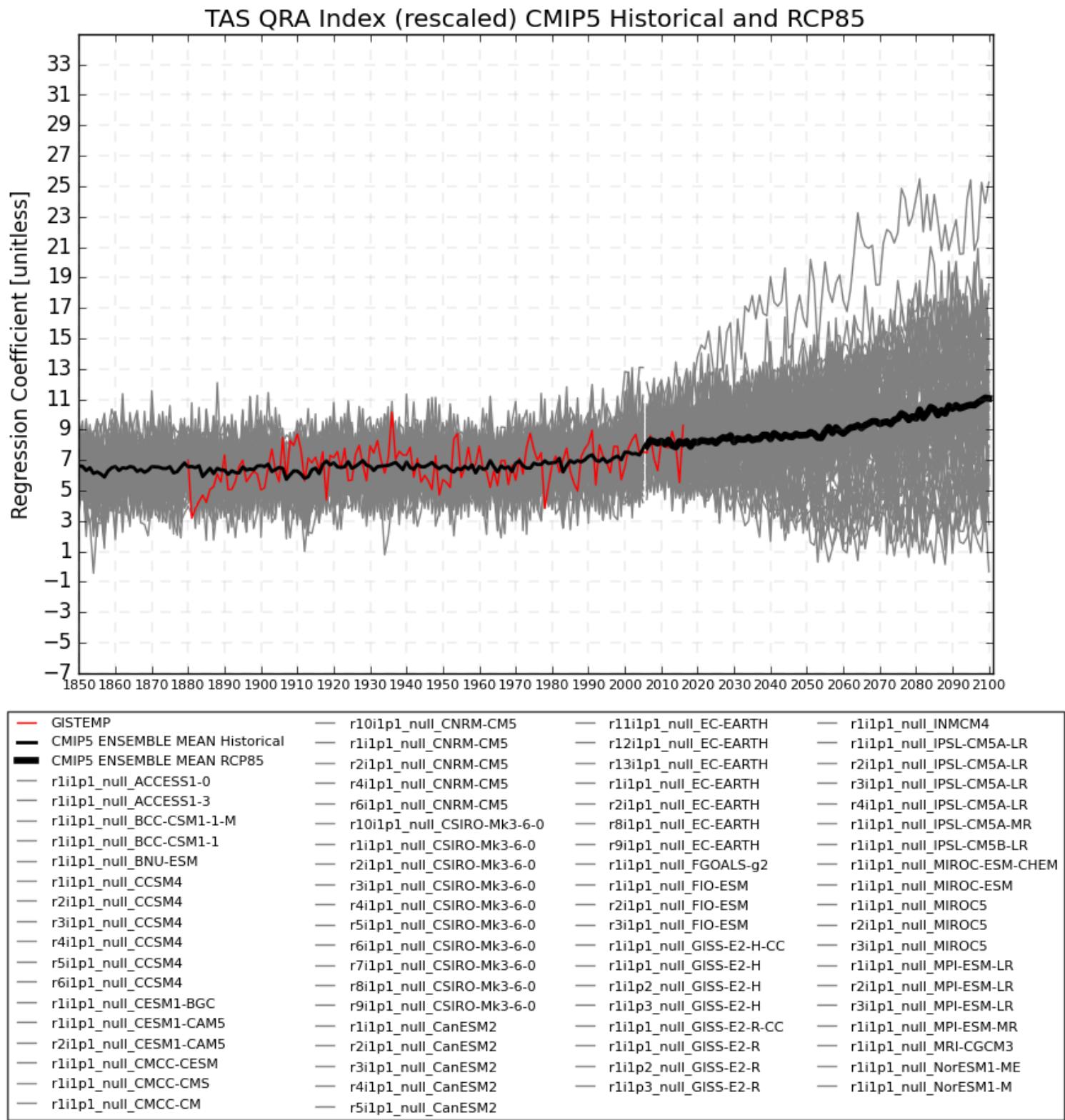
TAS QRA Index CMIP6 Historical and SSP370



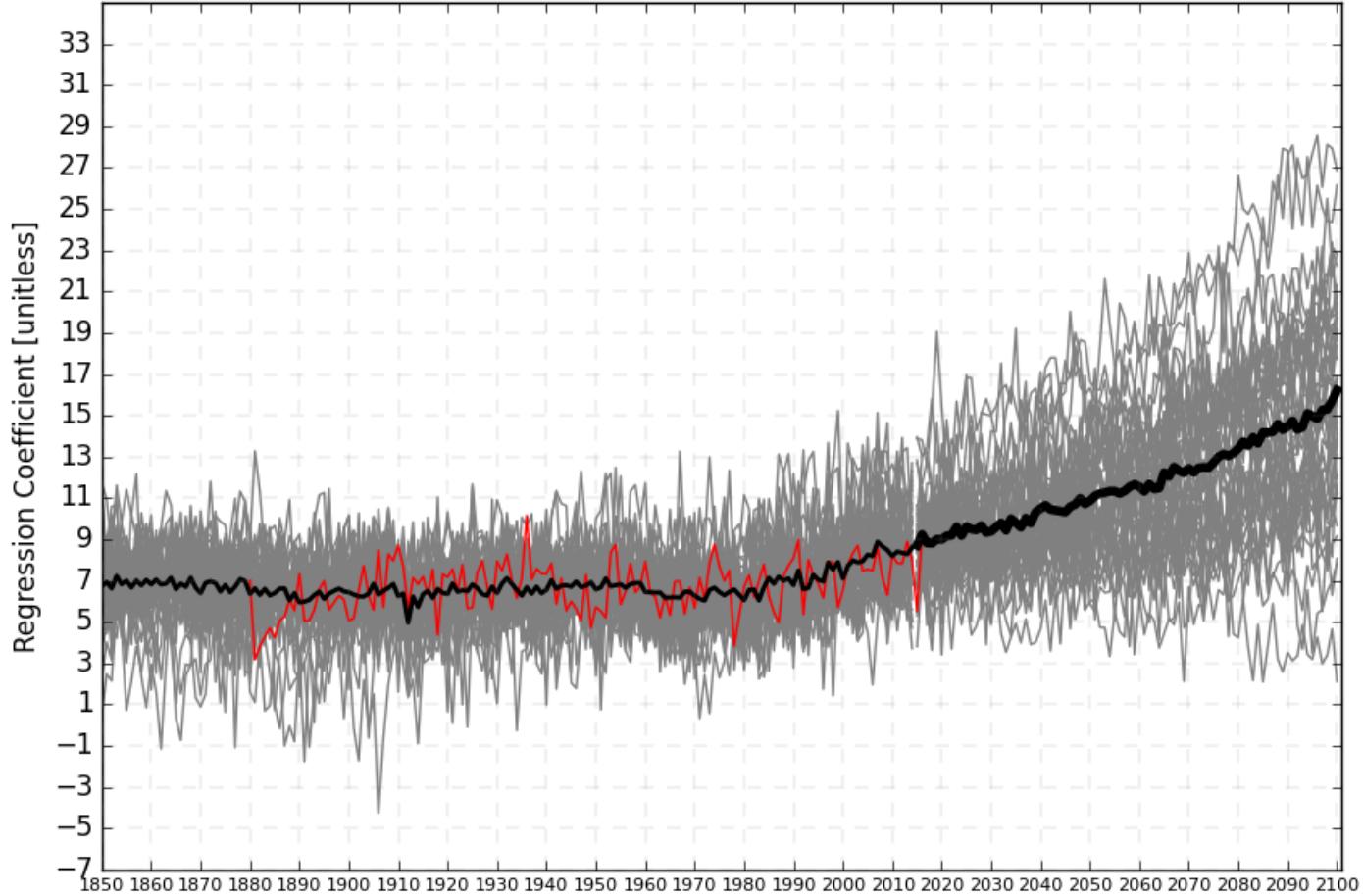
TAS QRA Index CMIP5 and CMIP6



6. Temperature QRA index (rescaled)

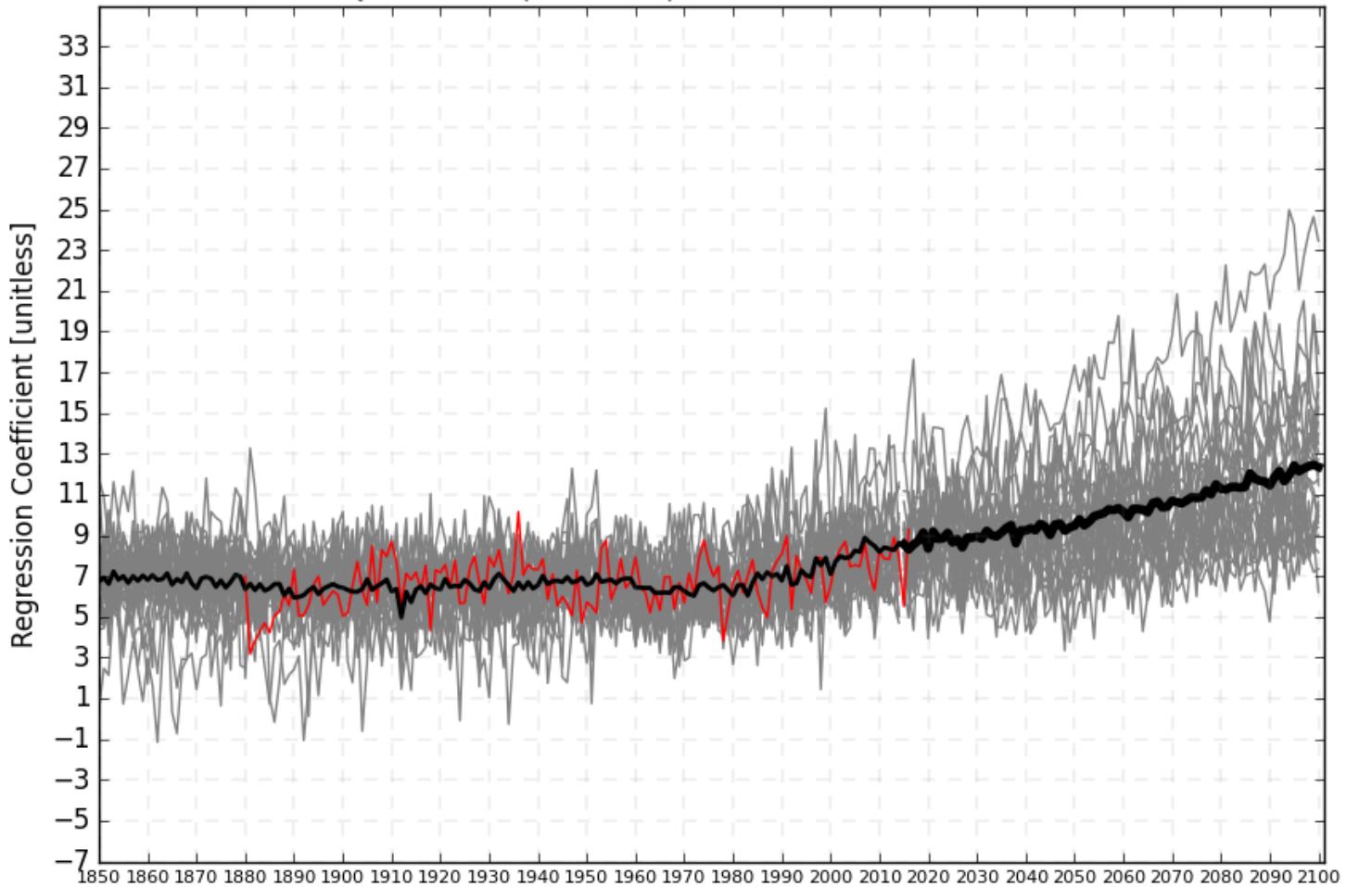


TAS QRA Index (rescaled) CMIP6 Historical and SSP585



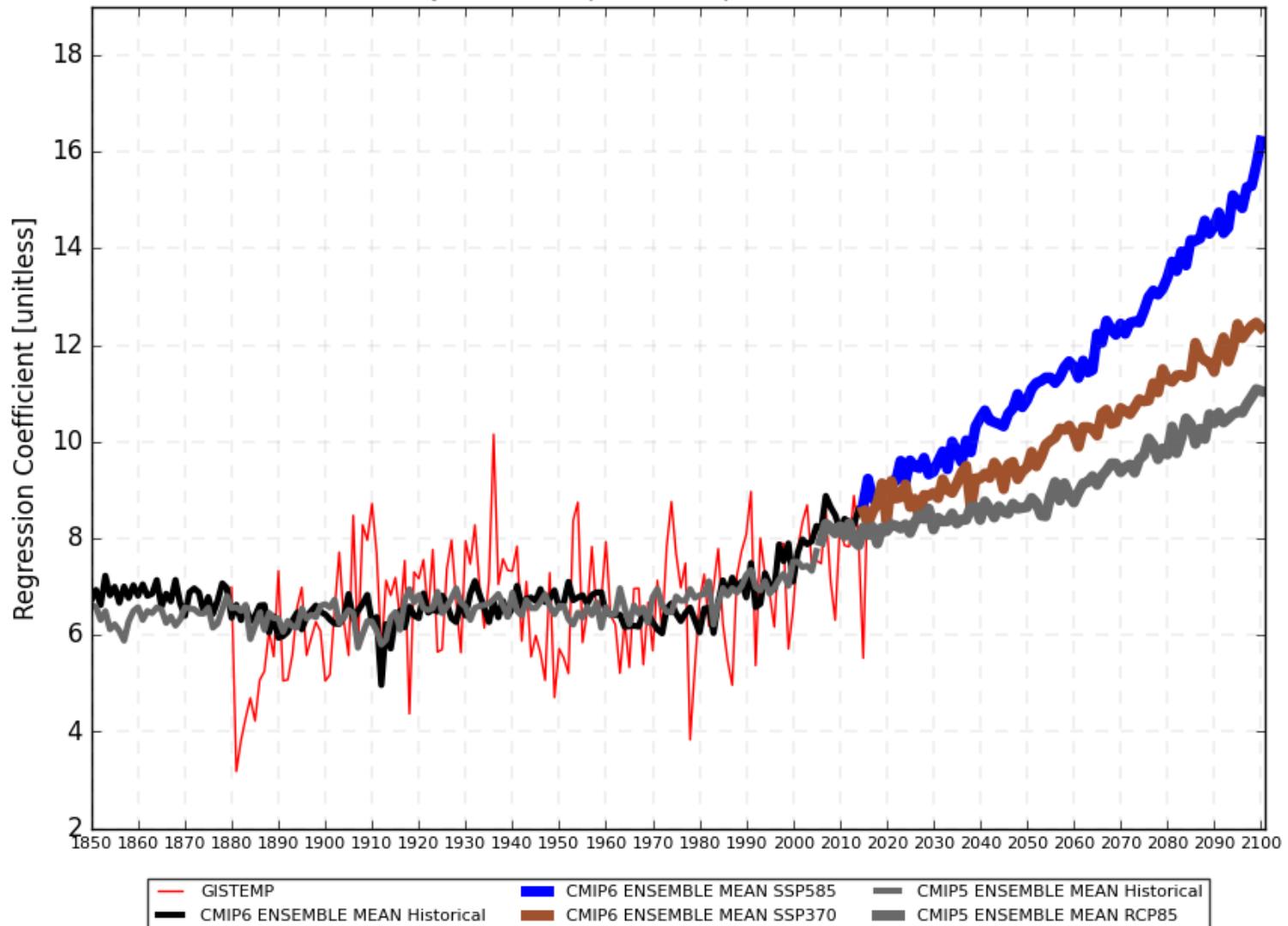
GISTEMP	r1i1p1f2_gr_CNRM-ESM2-1	r1i1p1f1_gn_FGOALS-g3	r1i1p1f2_gn_MCM-UA-1-0
CMIP6 ENSEMBLE MEAN Historical	r1i1p2f1_gn_CanESM5-CanOE	r1i1p1f1_gn_FIO-ESM-2-0	r1i1p1f2_gn_MIROC-ES2L
CMIP6 ENSEMBLE MEAN SSP585	r1i1p1f1_gn_CanESM5	r1i1p1f1_gr1_GFDL-CM4	r1i1p1f1_gn_MIROC6
r1i1p1f1_gn_ACCESS-CM2	r1i1p2f1_gn_CanESM5	r1i1p1f1_gr1_GFDL-ESM4	r1i1p1f1_gn_MPI-ESM1-2-HR
r1i1p1f1_gn_ACCESS-ESM1-5	r2i1p1f1_gn_CanESM5	r1i1p3f1_gn_GISS-E2-1-G	r2i1p1f1_gn_MPI-ESM1-2-LR
r1i1p1f1_gn_AWI-CM-1-1-MR	r1i1p1f1_gr_E3SM-1-1	r1i1p1f3_gn_HadGEM3-GC31-LL	r1i1p1f1_gn_MPI-ESM1-2-LR
r1i1p1f1_gn_BCC-CSM2-MR	r1i1p1f1_gr_EC-Earth3-CC	r1i1p1f3_gn_HadGEM3-GC31-MM	r1i1p1f1_gn_MRI-ESM2-0
r1i1p1f1_gn_CAS-ESM2-0	r1i1p1f1_gr_EC-Earth3-Veg-LR	r1i1p1f1_gr1_INM-CM4-8	r1i1p1f1_gn_NESM3
r1i1p1f1_gn_CESM2-WACCM	r1i1p1f1_gr_EC-Earth3-Veg	r1i1p1f1_gr1_INM-CM5-0	r1i1p1f1_gn_NorESM2-LM
r1i1p1f1_gn_CESM2	r1i1p1f1_gr_EC-Earth3	r1i1p1f1_gr1_IPSL-CM6A-LR	r1i1p1f1_gn_NorESM2-MM
r1i1p1f1_gn_CMCC-CM2-SR5	r4i1p1f1_gr_EC-Earth3	r1i1p1f1_gr_KACE-1-0-G	r1i1p1f1_gn_TaiESM1
r1i1p1f1_gn_CMCC-ESM2	r1i1p1f1_gr_FGOALS-f3-L	r1i1p1f1_gr1_KIEST-ESM	r1i1p1f2_gn_UKESM1-0-LL
r1i1p1f2_gr_CNRM-CM6-1			

TAS QRA Index (rescaled) CMIP6 Historical and SSP370

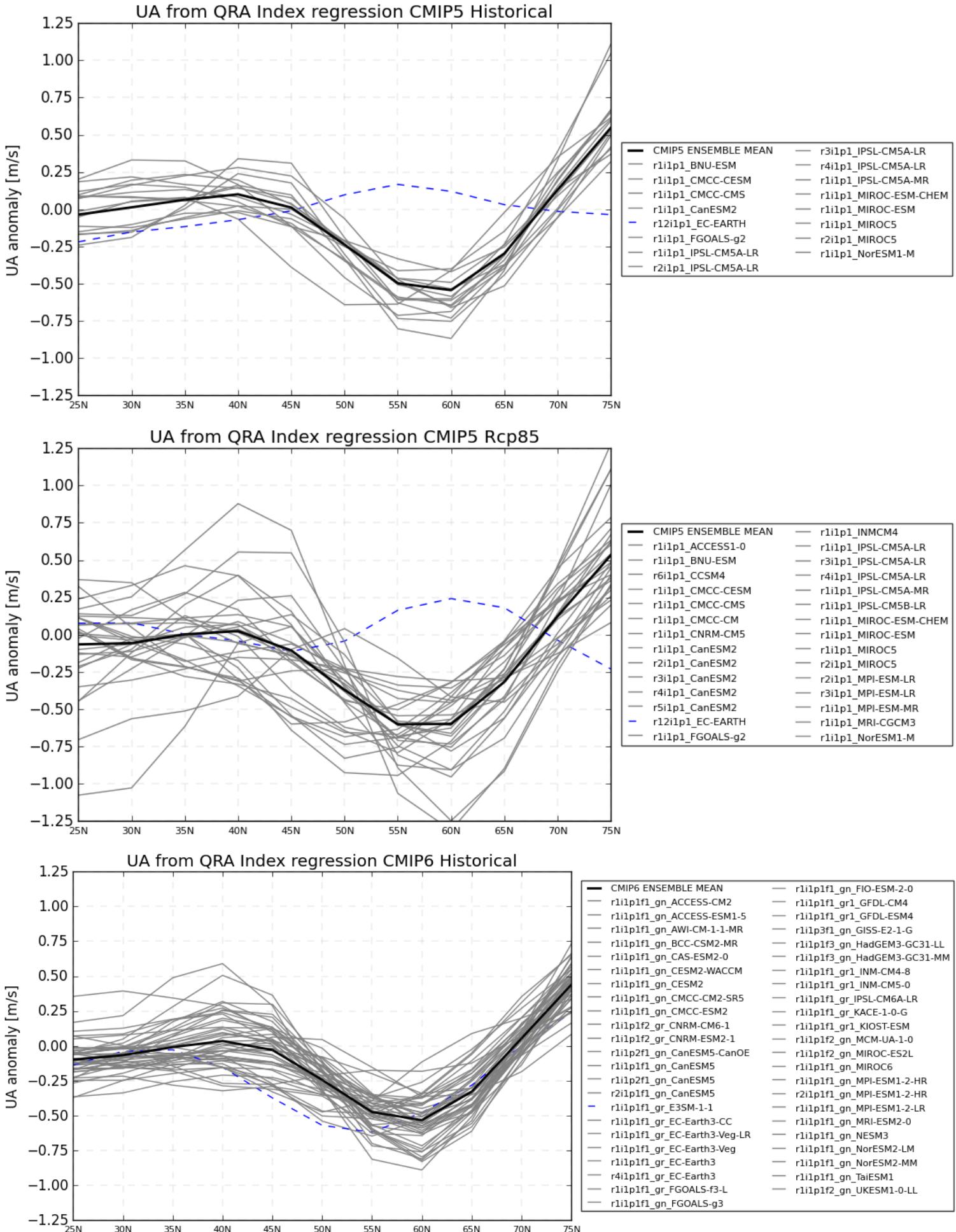


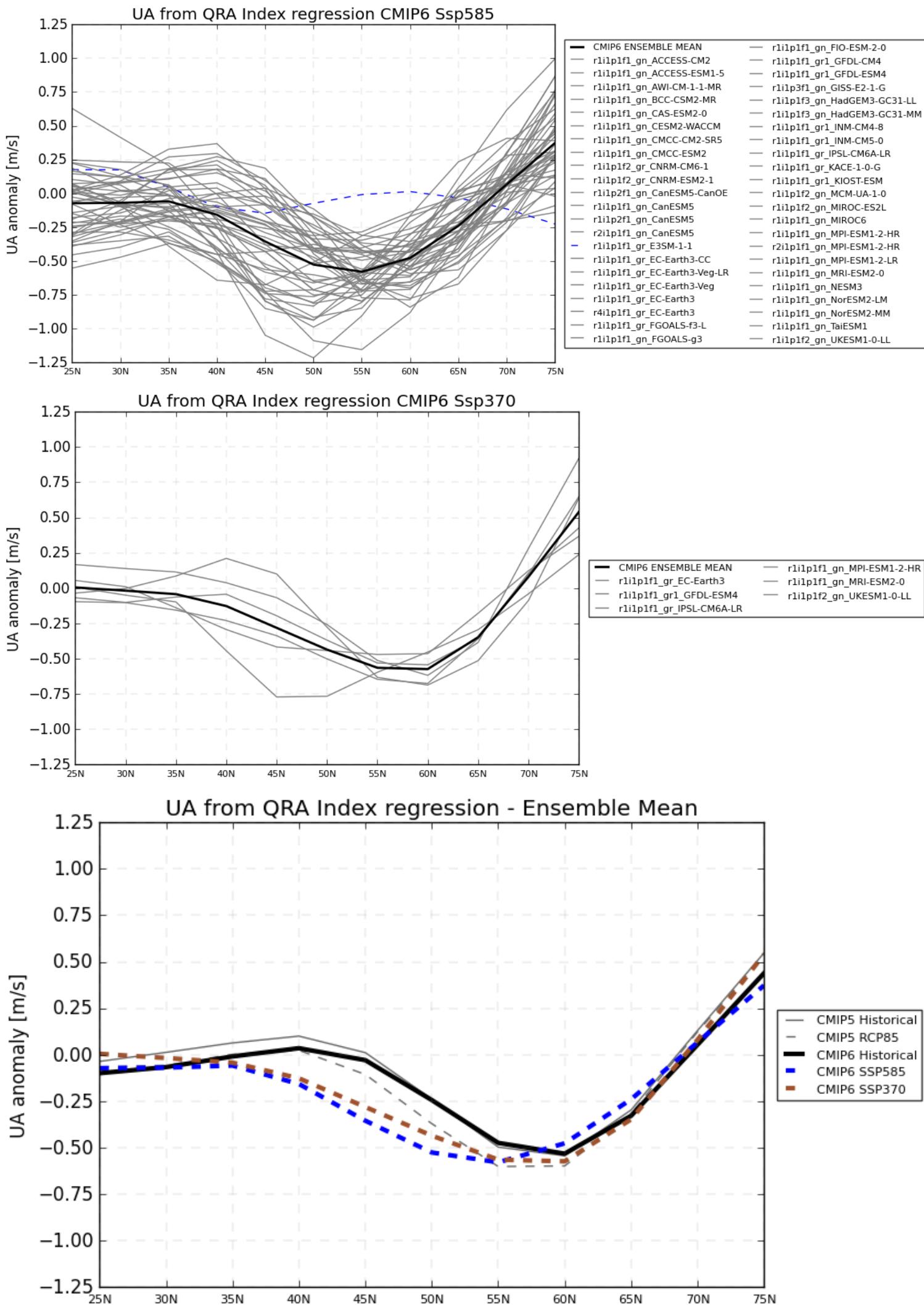
— GISTEMP	— r1i1p1f2_gr_CNRM-ESM2-1	— r1i1p1f1_gn_FGOALS-g3	— r1i1p1f1_gn_MPI-ESM1-2-HR
— CMIP6 ENSEMBLE MEAN Historical	— r1i1p1f1_gn_CanESM5	— r1i1p1f1_gr1_GFDL-ESM4	— r2i1p1f1_gn_MPI-ESM1-2-LR
— CMIP6 ENSEMBLE MEAN SSP370	— r1i1p2f1_gn_CanESM5	— r1i1p1f1_gr1_INM-CM4-8	— r1i1p1f1_gn_MPI-ESM1-2-LR
— r1i1p1f1_gn_ACCESS-CM2	— r2i1p1f1_gn_CanESM5	— r1i1p1f1_gr1_INM-CM5-0	— r1i1p1f1_gn_MRI-ESM2-0
— r1i1p1f1_gn_ACCESS-ESM1-5	— r1i1p1f1_gr_EC-Earth3-Veg	— r1i1p1f1_gr_IPSL-CM6A-LR	— r1i1p1f1_gn_NorESM2-LM
— r1i1p1f1_gn_BCC-CSM2-MR	— r1i1p1f1_gr_EC-Earth3	— r1i1p1f2_gn_MCM-UA-1-0	— r1i1p1f1_gn_NorESM2-MM
— r1i1p1f1_gn_CESM2-WACCM	— r4i1p1f1_gr_EC-Earth3	— r1i1p1f2_gn_MIROC-ES2L	— r1i1p1f2_gn_UKESM1-0-LL
— r1i1p1f2_gr_CNRM-CM6-1	— r1i1p1f1_gr_FGOALS-f3-L	— r1i1p1f1_gr_MIROC6	

TAS QRA Index (rescaled) CMIP5 and CMIP6



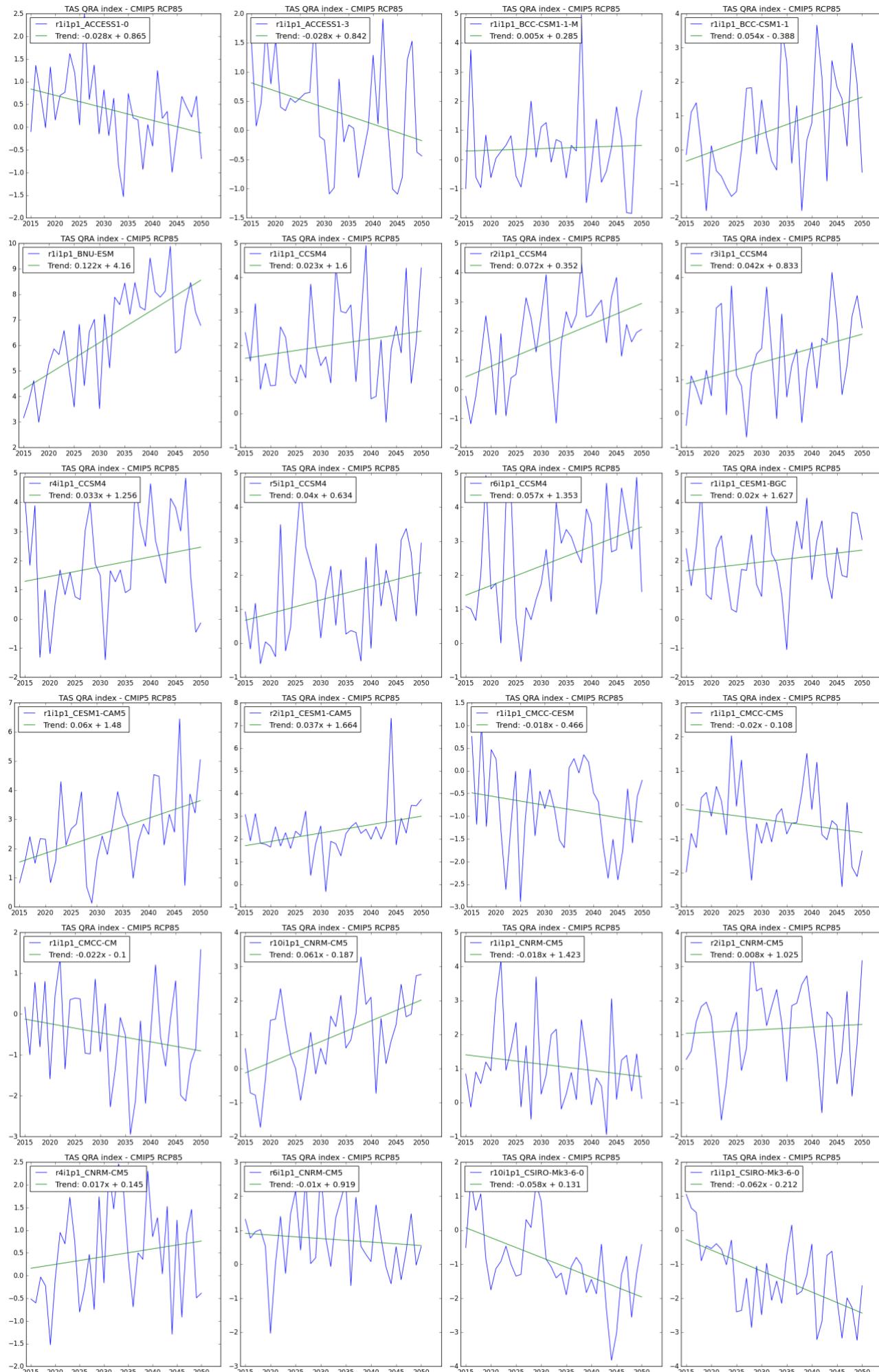
7. Temperature QRA index onto UA

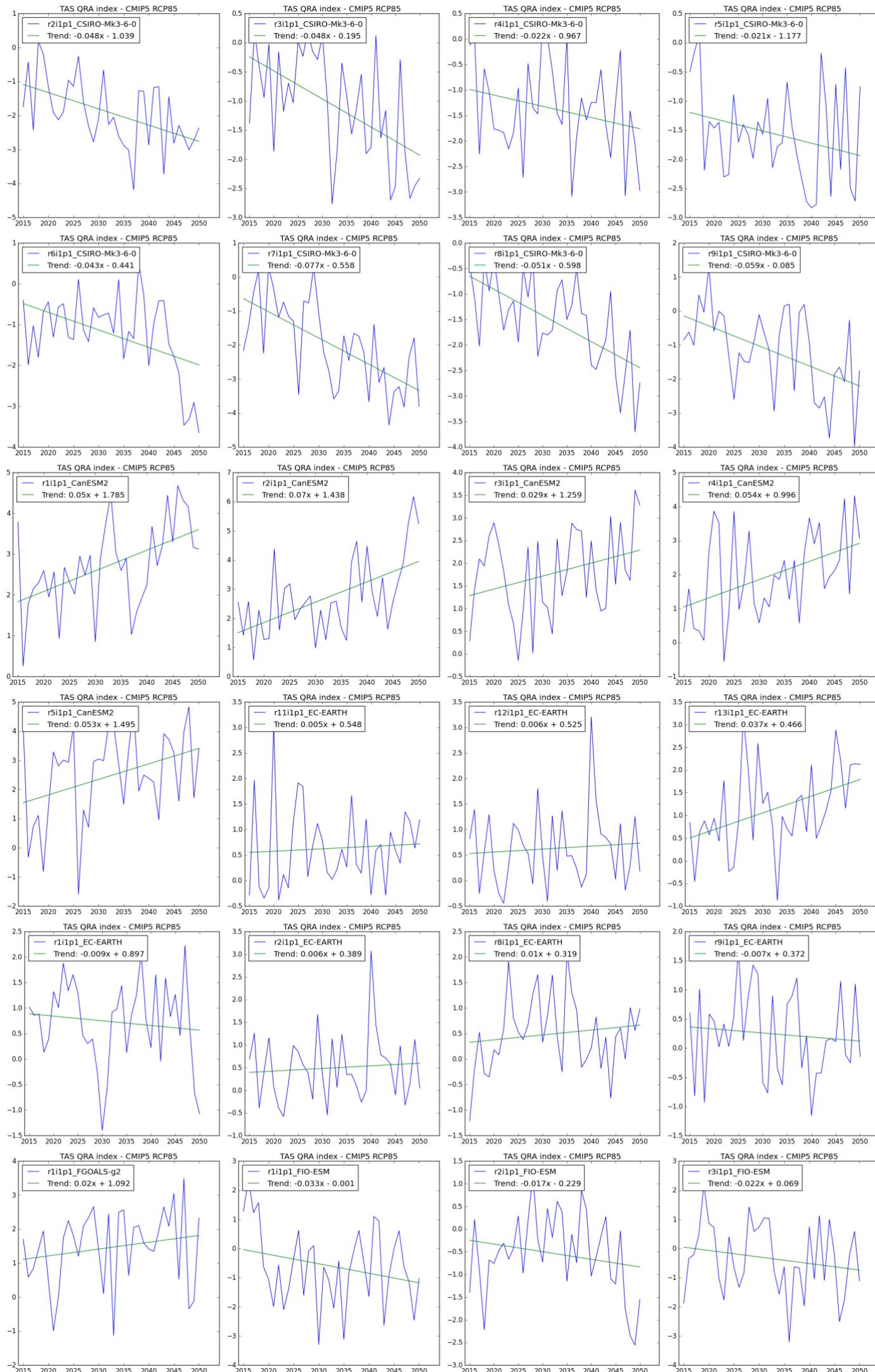


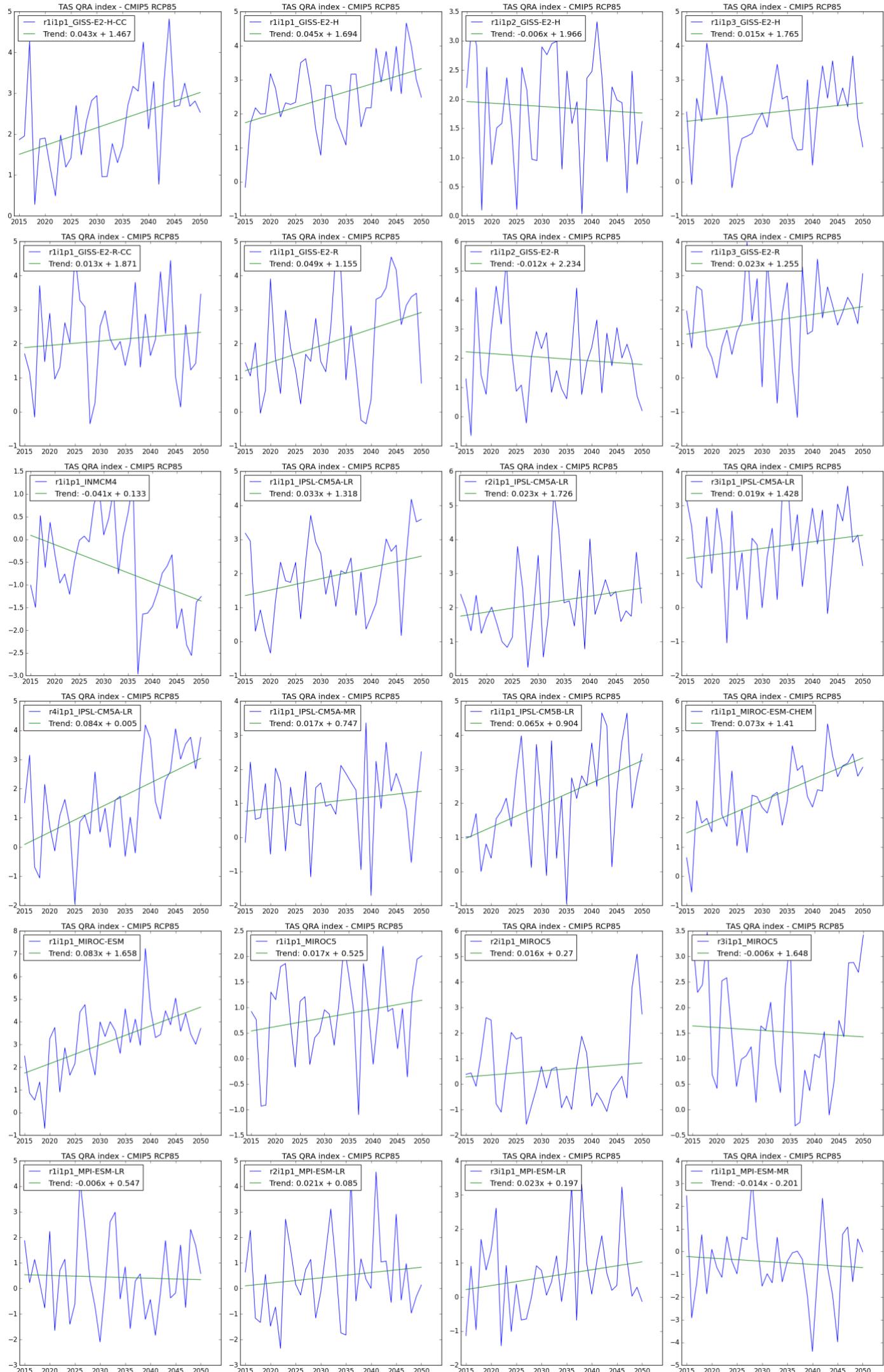


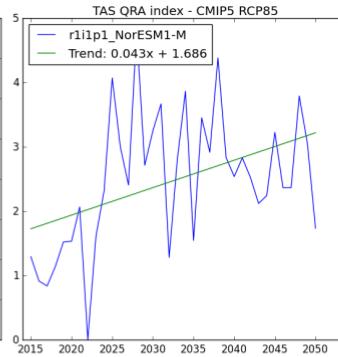
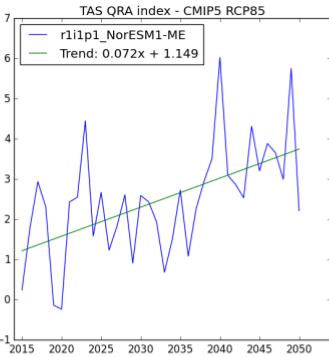
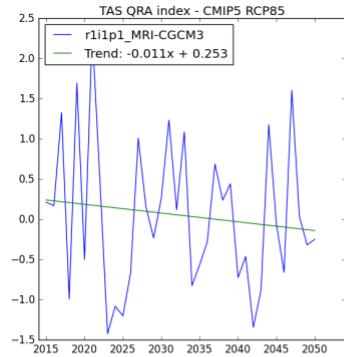
8. Temperature QRA index - trend by model

9.1 CMIP5 - RCP85 -> Trend for 2015-2050

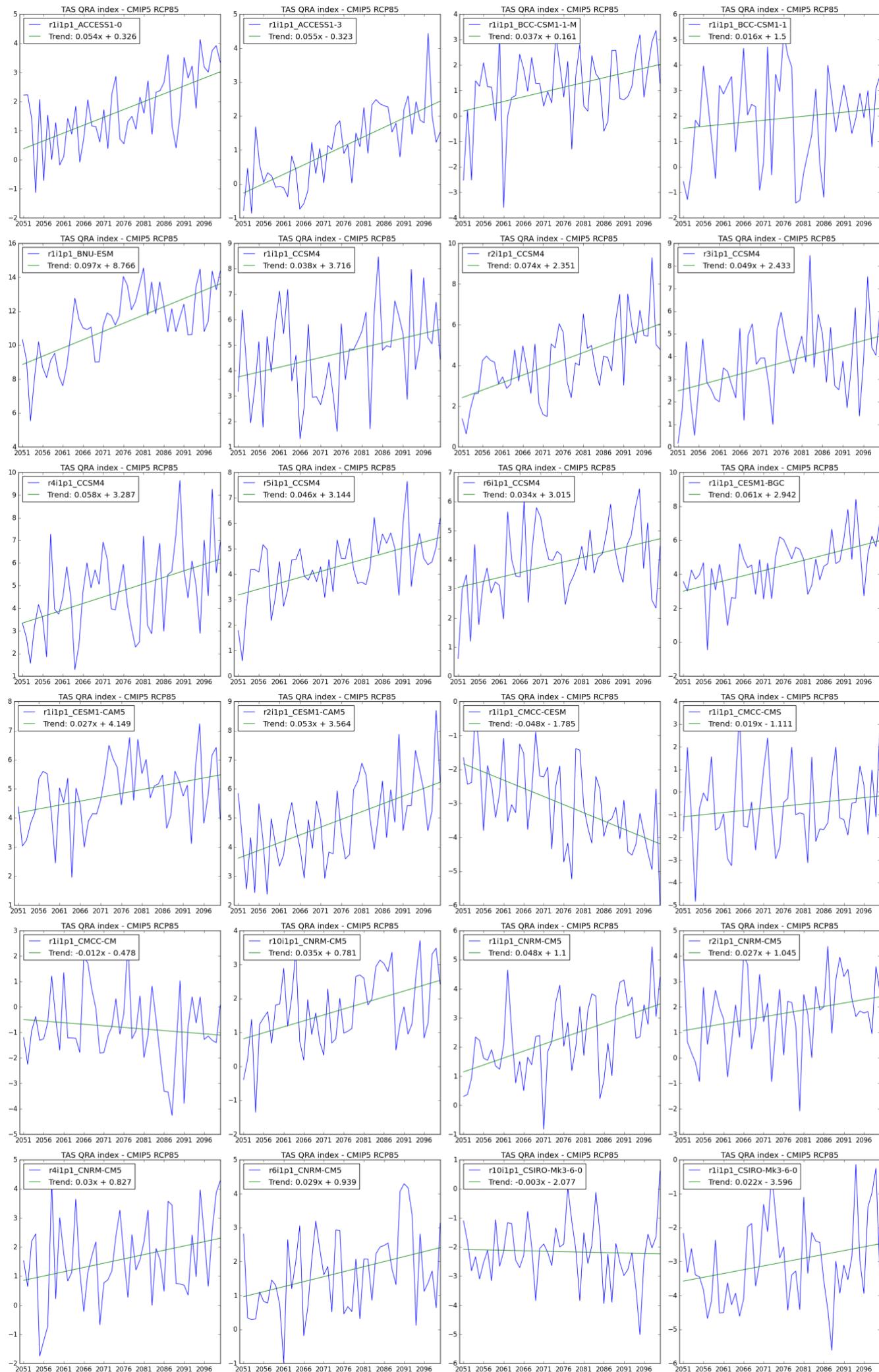


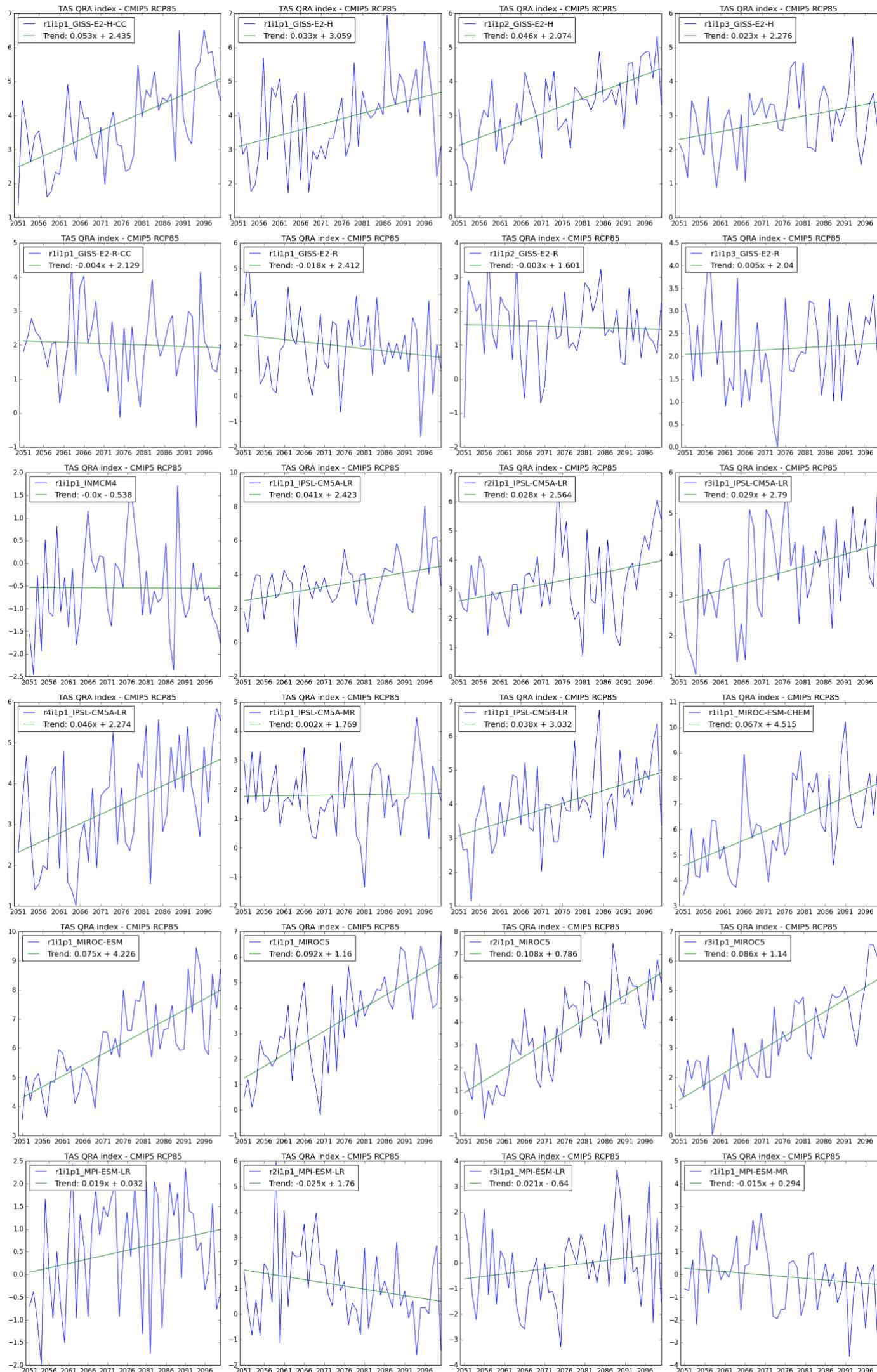


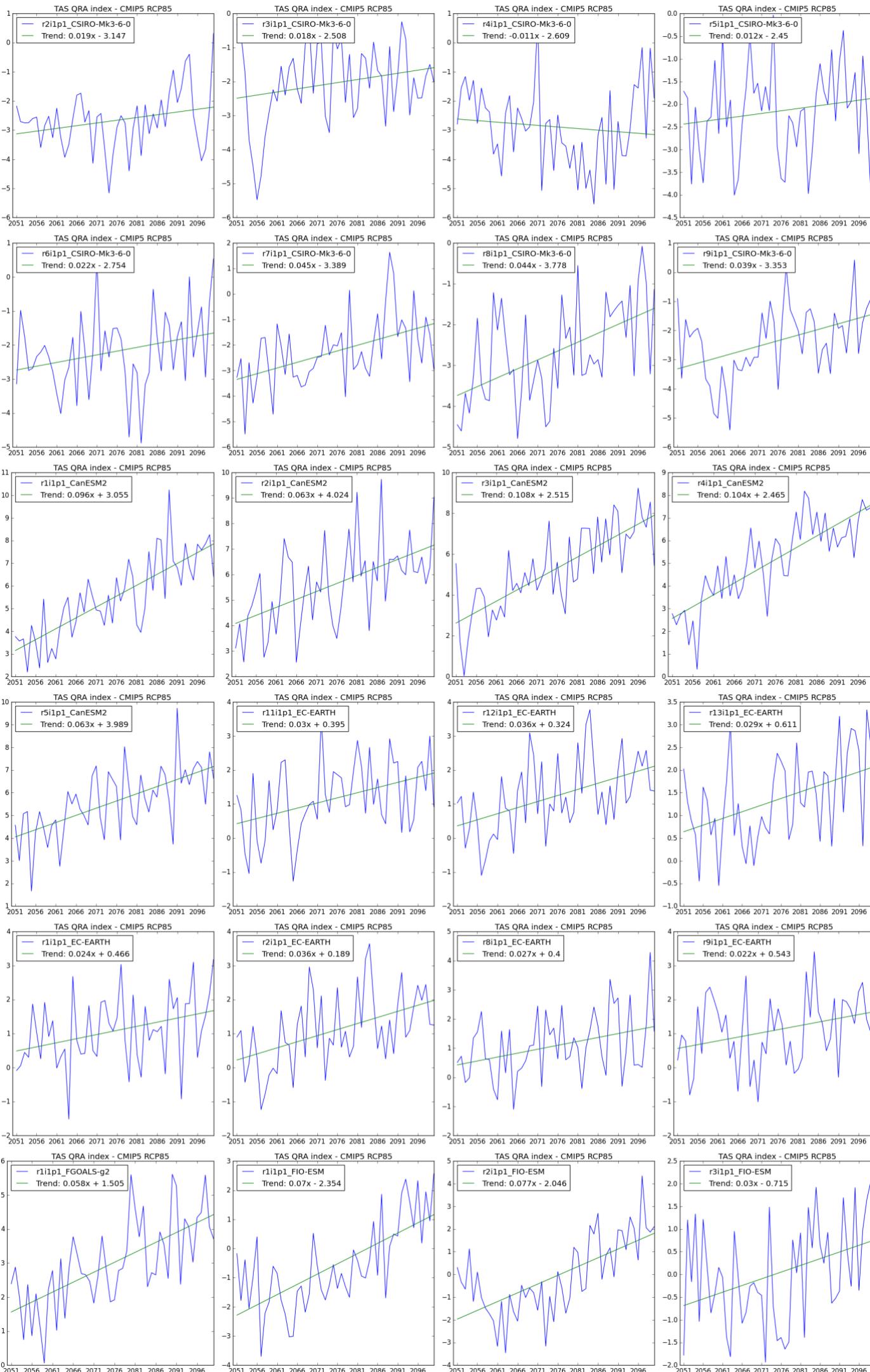


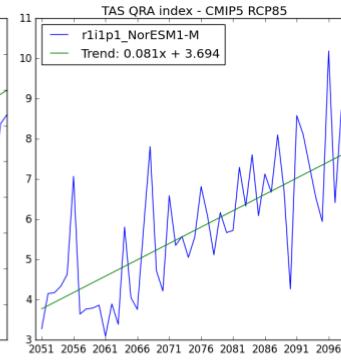
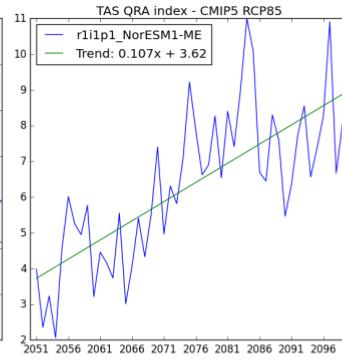
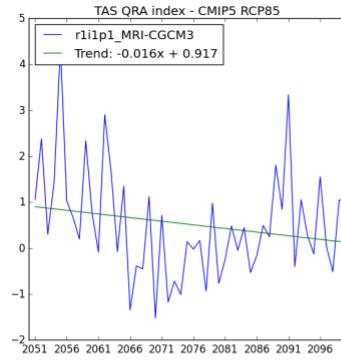


9.2 CMIP5 - RCP85 -> Trend for 2051-2100

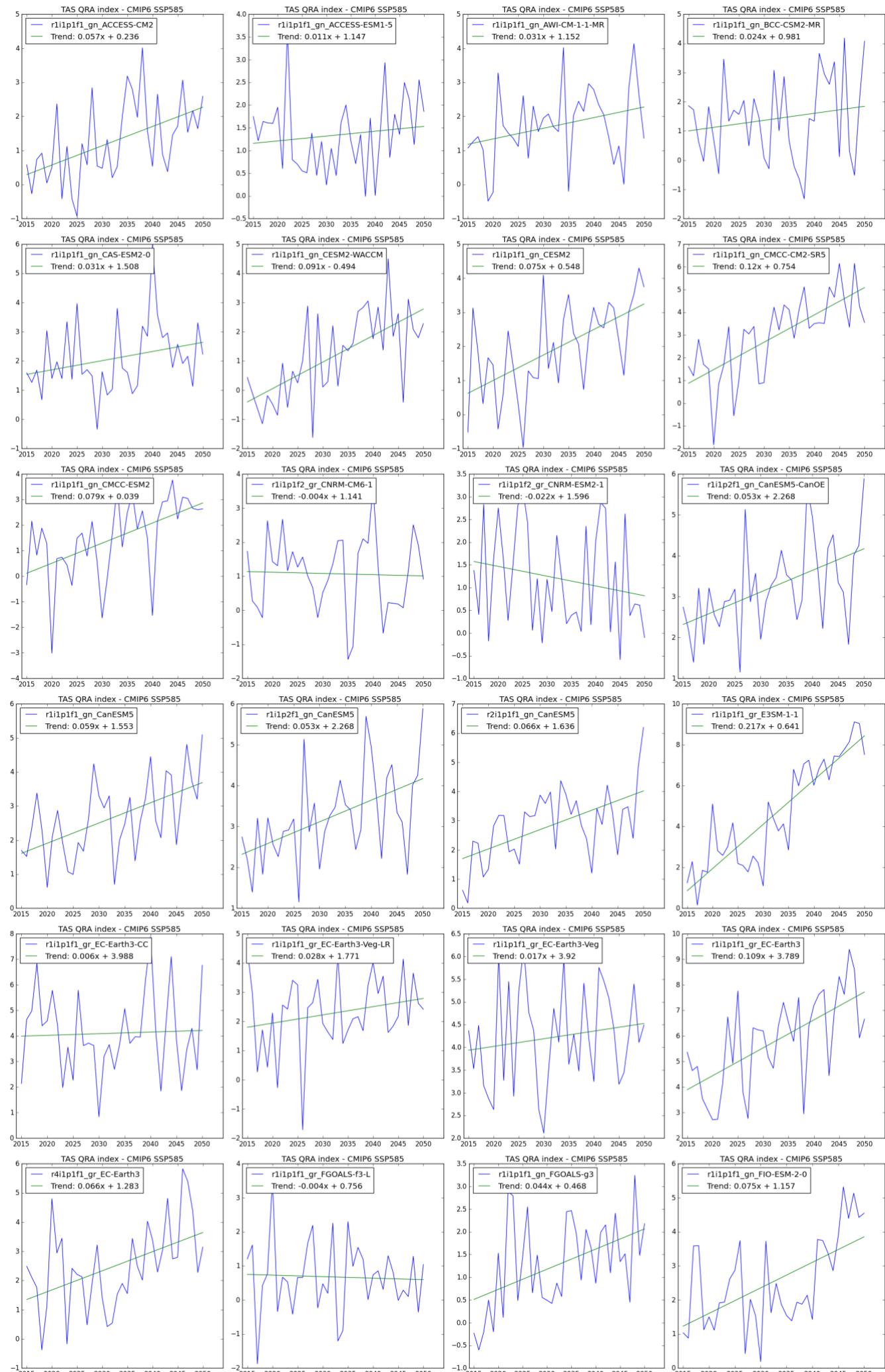


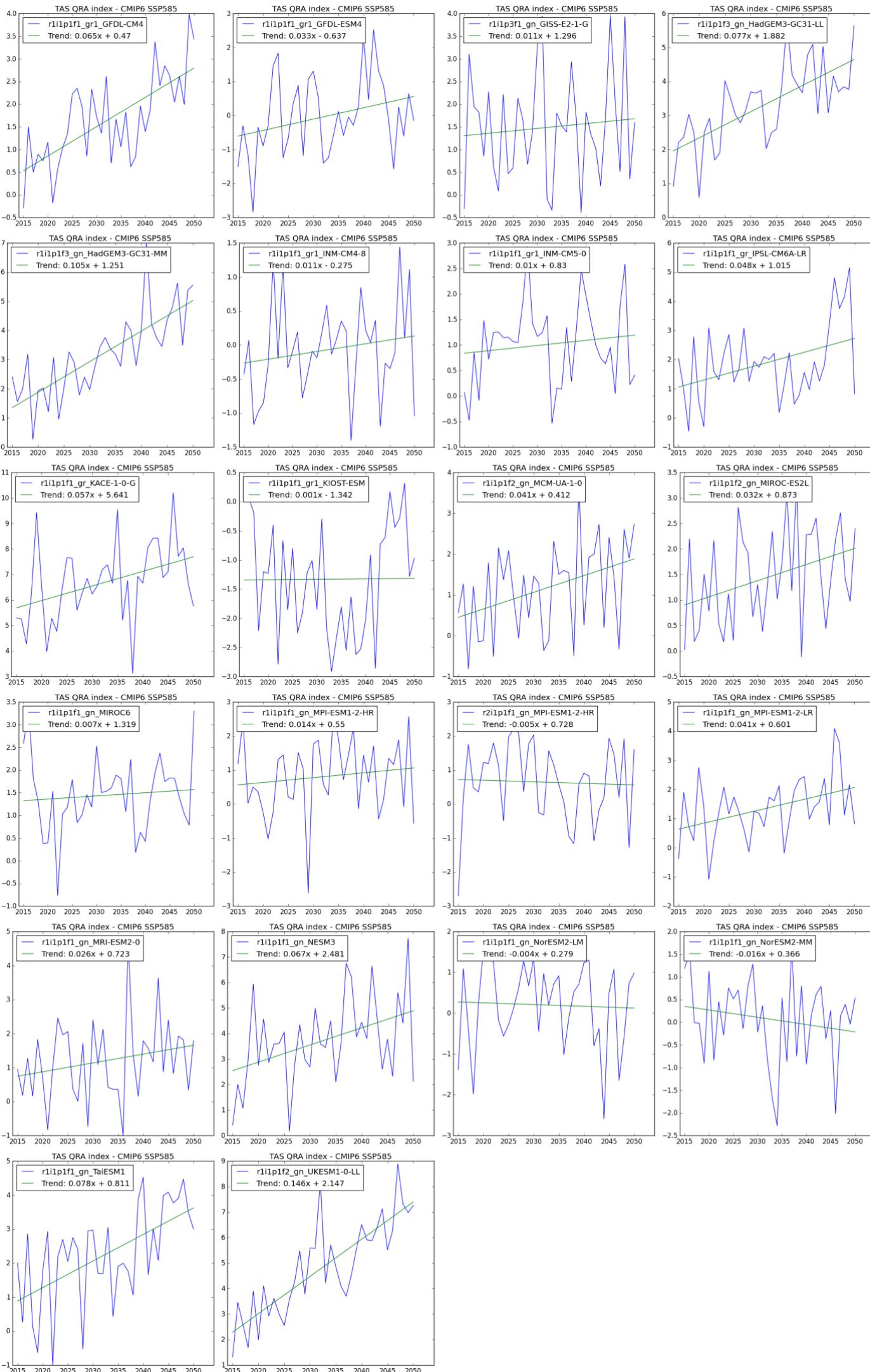






9.3 CMIP6 – SSP585 -> Trend for 2015-2050





8.4 CMIP6 – SSP585 -> Trend for 2051-2100

