

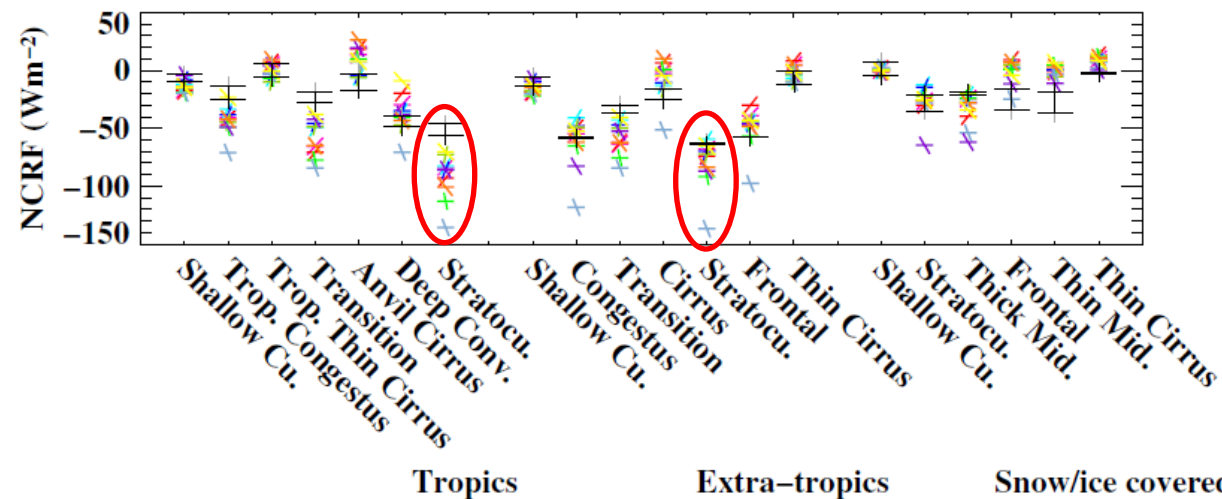
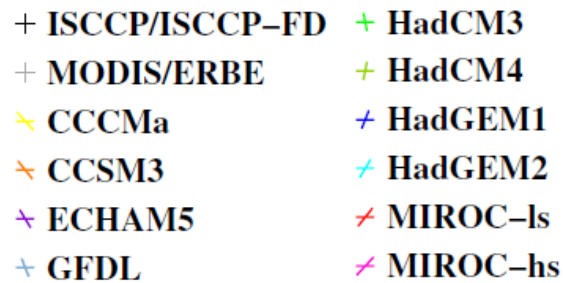
# Improved representation of marine stratocumuli in ECHAM6-HAM2

## Physical properties:

- Reduction in turbulent mixing in stable conditions
- Increased vertical resolution
- Reconstruction/restricted method by Grenier and Bretherton (2001), Siegenthaler-Le Drian (2010)

## Microphysical properties:

- Aerosol processing
- New drizzle scheme



# Impact on anthropogenic aerosol effect

## Changes in clouds

- Cloud cover
- Liquid water path
- Cloud lifetime

&

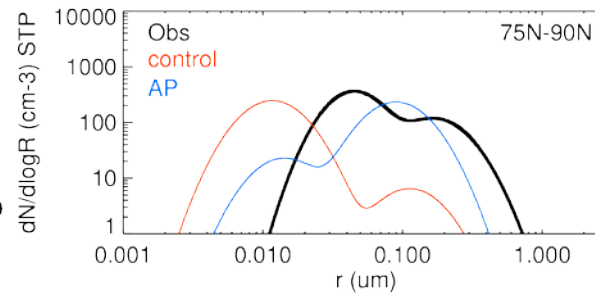
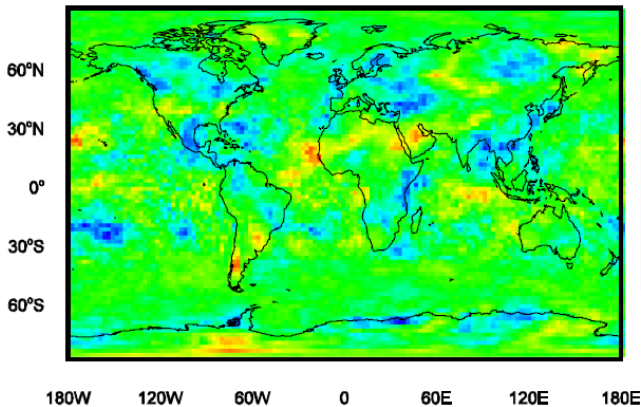
## Changes in aerosol

- Variability of scavenged fractions
- Changes in aerosol size distribution



## Changes in anthropogenic aerosol effect

Cloud cover AP - Ref (%)



Anthropogenic aerosol effect AP - Ref (W/m<sup>2</sup>)

