

# Exercise 4:

## CRD vs PRD



**Jaime de la Cruz Rodríguez**  
Institute for Solar Physics - Stockholm University

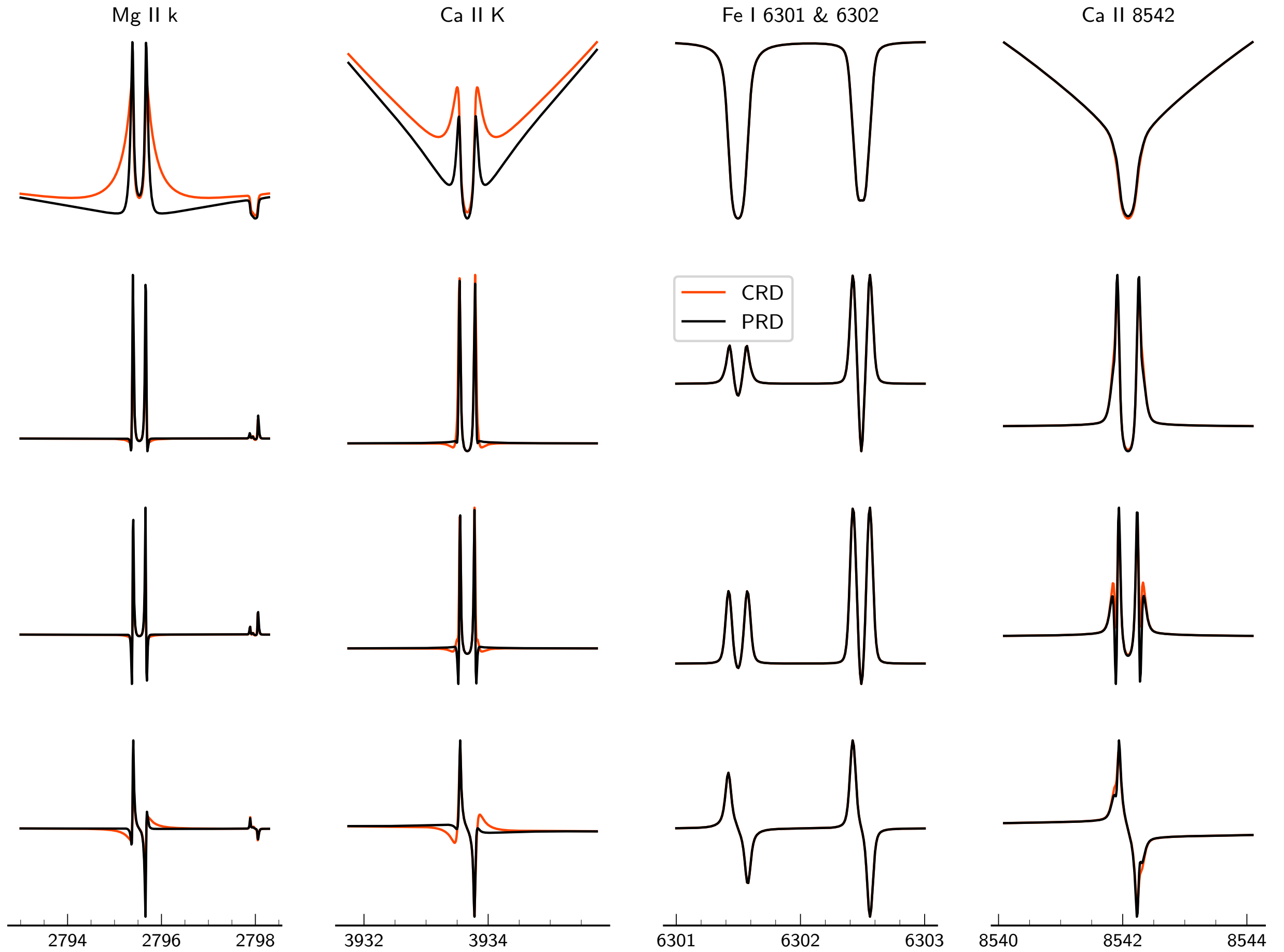
# PRD vs CRD

We will run the FALC model imposing CRD in all lines and then with PRD.

## Instructions:

1. CRD: the easiest way to disable PRD calculations is to set `PRD_N_MAX_ITER = 0` in `keyword.input`. In `input.cfg` set `output_profile = synthetic_CRD.nc`. Run STiC.
2. PRD: in `keyword.input` set `PRD_N_MAX_ITER = 3` and in `input.cfg` set `output_profile = synthetic_PRD.nc`. Run STiC.

# PRD vs CRD



# Summary

PRD effects appear in the wings of the line within a few Doppler widths.

PRD appears in strong lines because the damping wings become optically thick.

The core is mostly unaffected.