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Identifying chromospheric activity-sensitive spectral lines in the CARMENES VIS and NIR spectral range of M dwarfs.

In this contribution we use visible and near-infrared CARMENES spectra of M dwarfs to search for chromospheric activity-sensitive spectral lines in addition to the well known NaI D1, D2 HeI D3, H_{alpha} and CaII IRT lines, HeI 10830 AA, P_{gamma} and P_{beta} lines. To identify lines with a significant chromospheric contribution we have used the spectral subtraction technique, that is by subtraction of a synthesized stellar spectrum constructed using artificially rotationally broadened and radial-velocity shifted spectrum of an inactive star chosen to match the spectral type and luminosity class of the active star under consideration. We confirm the new activity-sensitive lines analyzing the correlation with the other well known activity indicators in the same spectra and their temporal evolution. This selection of lines will be used to check the influence in spectral region used to derive RV and help to solve the problem of stellar activity in RV measurements to search for exoplanet around these stars.

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