



MPG contribution to SP X.1 Atomic and molecular processes in attached/detached plasmas

TASK: Atomic and molecular hydrogen spectroscopy in ionizing and recombining plasmas

D004: Interpretation spectroscopy results using spectra simulation and (CR) modelling with YACORA (MPG)

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Interpreting spectroscopy results

Task: VIS molecule and atomic hydrogen spectroscopy in ionizing and recombining plasma conditions

- Interpretation spectroscopy results using spectra simulation and (CR) modelling with YACORA (MPG: U. Fantz, D. Wunderlich, R.C. Bergmayr, J. Hörsch)

Approach

- Planning, preparing and performing joint OES measurements (Balmer lines + Fulcher- α band) with DIFFER team at Magnum-PSI (Jarrel-Ash spectrometer, 2400 ln/mm, 30 LOS, CCD) during TALIF campaign.
- Assistance to TALIF measurements at Magnum-PSI.

Results and Outlook

- Preprocessing of measured signals (LOS determination, wavelength calibration, absolute intensity calibration) finished.
- Interpretation of absolutely calibrated spectra ongoing.
- VUV measurements planned for 2025.

Deliverable: **PWIE-SP X.1.T-T004-D004**

Status: **ongoing**

Facilities: **Magnum-PSI, Yacora**

Linked WP or TSVV: --

