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Successful Commissioning of UVES at Kueyen

Finally, we are there: as of April 1, 2000, UVES, the UV-Visual Echelle Spectrograph built by ESO, will start operation at the Nasmyth focus of the VLT telescope Kueyen. The instrument commissioning has been completed in December 1999, eight years after the first proposal to build a high-resolution spectrograph for the VLT was circulated and in perfect schedule with the first detailed VLT planning dated March 1994. UVES will be the third instrument after FORS1 and ISAAC to enter into regular use at the VLT. The second version of FORS, FORS2, will start operating at the same date at the Cassegrain focus of the telescope.

The figure to the right is an unprocessed section of a 1-hour integration in the blue arm showing the central portion of a few echelle orders centred at 380 nm. It clearly illustrates some of UVES prime capabilities: the UV-blue efficiency and the image quality of the atmosphere/telescope/spectrograph system (see page 2).

The two parallel tracings correspond to the two images of a gravitationally lensed QSO (HE1104-1805) separated on the sky by 3.2 arcsec, blue magnitudes ~ 16.7 and 18.6 respectively. The CCD was read-out in binned 2×2 mode. The vertical line at the bottom is a sky-emission line and it visualises well the spectral resolution of ~ 55,000. The redshifts, widths and equivalent widths of the absorption lines along the 2 lines of sight provide a mini-"tomography" of the intergalactic/interstellar medium up to the distance corresponding to $z = 2.1$. Some of the broad absorption lines ($\text{Ly}\alpha$) and the narrow metal absorption (e.g. in the second order from the bottom) reveal column density and velocity variations over a scale of a few kpc.

