

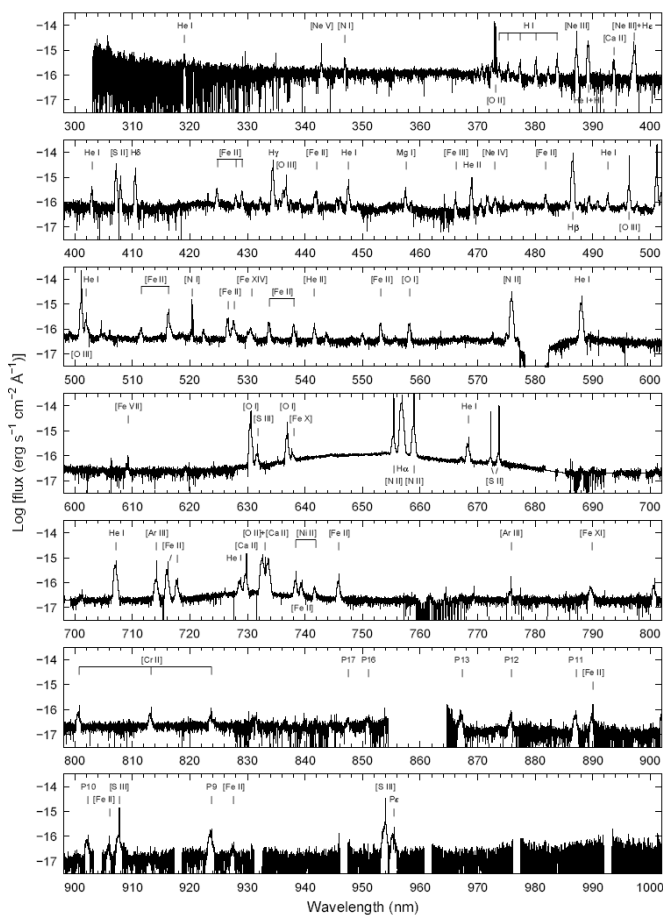
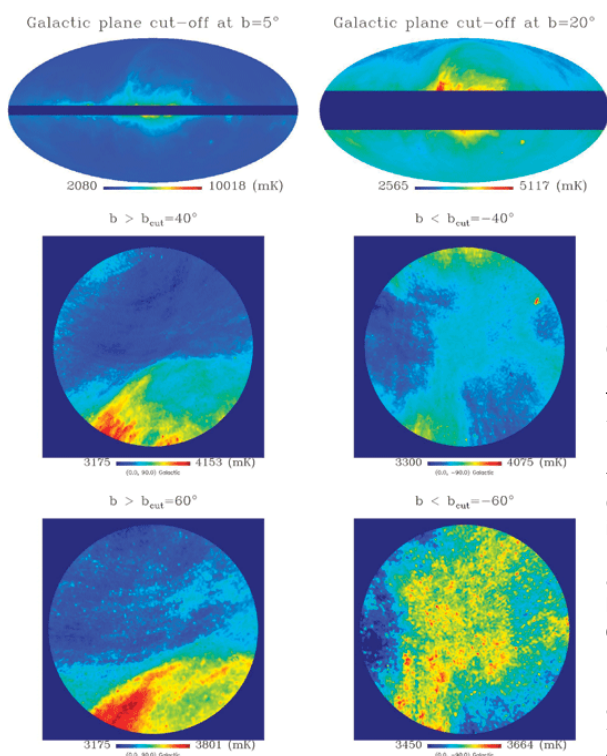
HIGHLIGHTS: this week in A&A

Volume 479-3 (March 1 2008)

In section 6. Interstellar and circumstellar matter

“High resolution spectroscopy of the inner ring of SN 1987A”, by P. Gröningsson et al., A&A 479, p. 761

The authors discuss high resolution VLT/UVES observations of the interaction between SN 1987A and its circumstellar ring. A large number of narrow emission lines from the unshocked ring have been identified with ion stages from neutral up to Ne V and Fe VII. They observe a wide range of ionization stages from neutral lines to [Fe XIV] from the shocked component. The authors discuss these observations in the context of radiative shock models, which are qualitatively consistent with the observations.



In section 3. Cosmology

"The impact of Galactic synchrotron emission on CMB anisotropy measurements I. Angular power spectrum analysis of total intensity all-sky surveys", by L. La Porta et al., [A&A 479, p. 641](#)

The cosmic microwave background remains one of the key tools to study the early universe, its content, and geometry. Interpreting these exquisite data has so far been hampered by foreground contaminating radiation of both Galactic and extragalactic origins. This paper suggests a novel approach to improving foreground removal, particularly for the component related to Galactic synchrotron emission. By combining the angular power spectra of all-sky total intensity maps at 408 MHz and 1420 MHz, the authors have been able to quantify the contribution of synchrotron emission precisely. However, a puzzle still remains as more than 50% of the WMAP signal must be provided by other components such as free-free and/or spinning dust grains. Efficient foreground removal therefore remains one of the crucial issues in fully exploiting future WMAP/Planck CMB data.