Metallic abundances of the 2002 Leonid meteor

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The High-Definition TV spectra in the visual--ultraviolet region were obtained during the 2002 Leonid aircraft campaign. The ultraviolet wavelengths of between 300--600¥,nm were observed, and the neutral metallic atoms were identified, mainly MgI, FeI, NiI, CaI and NaI. From the analysis of the spectra, time variation of the abundances of metallic atoms and of their electronic excitation temperature were obtained. The intrinsic metallic abundances of the meteor generally agree with the solar abundance, and the volatility features of metallic atoms with the time variation were also confirmed. The 309¥,nm emission was resolved into the double peaks by the HDTV spectroscopic observation. The discussion of the possibility of the emission element is one of the interesting subjects of the meteor.