all wavelengths. Fabry-Perot interferograms were taken in all nights, and had priority in the two clear nights. A preliminary evaluation of the data shows only the gradient in the continuum radiation and no evidence for line emissions. The H_2 quadrupole line was detected on July 18, 2:34 UT with ESO's NTT telescope and infrared spectrograph, i. e. with significantly larger telescope aperture and somewhat larger spectral resolution, by R. Schulz, Th. Encrenaz, J. Stüwe, and G. Wiedemann. The (stronger) auroral line at 3.533μm was also detected by this group. A more elaborate effort will be necessary to either prove detection of the lines with the Fabry-Perot interferometry or to provide upper limits on their fluxes. If the lines are detected the data will allow to study the time variability of the emissions related to the aging of the impact clouds.

IMPACT L OBSERVED AT A WAVELENGTH OF 892 nm WITH THE SOLAR VACUUM TELESCOPE ON TENERIFE

H. Schleicher, H. Balthasar, M. Knölker, W. Schmidt (Kiepenheuer Institut, Freiburg, Germany), K. Jockers (MPI Aeronomie, Katlenburg-Lindau, Germany

During the impact of fragment L filtergrams of high spatial and temporal resolution were obtained in the methane band centered at 892 nm with the solar vacuum tower telescope (VTT) located at Izaña, Tenerife. The VTT has an aperture of 0.70 m and a focal length of 45 m. Images were taken every 20 s in the prime focus with a CCD camera operated in 512 $\times$ 512 pixel mode. One pixel corresponds to 0.175 arcsec. The spatial resolution varied between 0.5 and 1.5 arcsec due to seeing effects. The exposure time was 2.5 s. At 22:20:52 UT, four minutes after the impact time based on Galileo images, a first brightening above the dark southeast limb of Jupiter was recognized. A first maximum was reached after five minutes. The subsequent decline of brightness was interrupted at 22:31:52 by a sudden bright flare with a lifetime of 90 s. Within our resolution the two recorded emission features are cospatial. The flux of this flare was $(3.4 \pm 0.2) \times 10^{-4}$ of Jupiter's total flux at this wavelength. The feature became almost invisible 19 minutes after its first detection. At 22:43 UT, 26 minutes after the impact, a new brightness enhancement rotated into view which could be identified with the dark impact signature (debris cloud) observed in the visual wavelength range.

We attribute the first brightening with the arrival of the fireball into the line of sight and the last brightness enhancement with the debris left in the wake of the entering cometary fragment (Crawford et al. 1994). The arrival time of the first brightening four minutes after the nominal impact time as observed by Galileo is significantly larger than the 50 seconds predicted by these authors for a 3 km ice body. This indicates that the size of fragment L must have been significantly smaller. The role played in the impact process by the flare of 90 s duration is still unclear.

References:

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SL-9 FRAGMENTS A, E, H, L, Q1 COLLISION ONTO JUPITER: MID-INFRARED LIGHT CURVES

P.O. Lagage, Ph. Galdemard, E. Pantin, R. Jouan, P. Masse, M. Sauvage (CEA, Centre d'Etudes de Saclay, Gif-sur-Yvette, France), G. Olofsson, M. Huldtgren (Stockholm Obs., Sweden), J.A. Belmonte, C. Regulo, J.M. Rodriguez Espinosa, L. Vidal (Inst. de Astrophys. de Canarias, Spain), B. Mosser (IAP, Paris, France), D. Gautier (Obs. Meudon, France)

A coordinated program of mid-IR observations of the comet Shoemaker-Levy 9 crash onto Jupiter has been conducted from 3 telescopes: the Nordic Optical Telescope at La Palma, the 3.6m ESO telescope at La Silla and the CFHT at Hawaii. The prime aim was the search for temperature fluctuations associated with seismic waves, possibly generated during the crash. Such a detection would be of valuable interest, as it would give unique information about the Jovian interior. It is too early in the process of data reduction to give meaningful results about seismic waves. However we can already report on the unexpected huge IR spot seen after the impacts.

Because of favourable weather conditions, the majority of the results during the impact week came from the Nordic Optical Telescope. These results were obtained with the Saclay CAMIRAS camera equipped with a 64*64 Si:Ga/DVR detector array developped at LETI/LIR (CEN Grenoble). A broad- band filter centered at 11.9 microns was used; the pixel field of view was 0.8 arcsec; an image was stored every second. Ten impacts were observed. A bright IR spot was observed after impacts A, E, H, L, Q1, whereas impacts F, Q2, P2, T and U were not detected.