

Modeling of QIT-MS Performance During the Venus Atmospheric Descent

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We are investigating the combined experimental and theoretical response of the QITMS spectrometer during the descent of the VISAGE spacecraft through the Venus atmosphere. Investigation covers the flight from top of the Venus clouds (~65km) down to the surface. The molecular composition of the Venus atmosphere is based on the Venus-GRAM (Venus Global Reference Atmospheric Model). The simulated mass spectrum output of the QIT-MS was then analyzed and results compared against the expected composition of the atmosphere at particular phases of the atmospheric descent.