

Monday 11 May 2009

13:00	Opening by Håkan Svedhem, ESLAB 2009 Programme committee Chair
	Welcome address by Richard Marsden, Head of the Research and Scientific Support department
	Video message from David Southwood, ESA Director of Science

Introduction lecture

chair: H. Svedhem

13:15	The comparative Planetology, Climatology and Biology of Venus, Earth and Mars as revealed by past, current and	Taylor, F.	Oxford University
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Interior & subsurface

chair: Sohl, Rosenblatt, Schumacher

14:15	Assessing the structure of planetary interiors from satellite and ground-based geophysical data: A comparative study	Mocquet, A.	Nantes University
14:45	A Simple Seismological Approach to Core Size Determination	Knapmeyer, M.	DLR
15:05	DEEP VS. SHALLOW ORIGIN OF GRAVITY ANOMALIES, TOPOGRAPHY AND VOLCANISM ON EARTH, VENUS AND MARS.	Steinberger, B.	Geological Survey of Norway
15:25	Tectonics on a one-Plate Planet: The Spatial Variability of the Martian Elastic Lithosphere Thickness and a Comparison with Earth's Continents	Grott, M.	German Aerospace Center
15:45	Coffee break		
16:15	Magnetic fields and planetary dynamos	Christensen, U.	Max Planck Institute for Solar System Research
16:45	How to kickstart planets: On the influence of the initial conditions	Ziethé, R.	ESA-ESTEC
17:05	Thermo-chemical convection and the survival of reservoirs of dense material in the Earth's lower mantle	Deschamps, F.	ETH Zurich
17:25	MODELLING THE THERMO-CHEMICAL EVOLUTION OF THE INTERIORS OF EARTH, VENUS AND MARS	Tackley, P.	ETH Zurich
17:45	Discussion		
18:10	End of Session		
18:10	Welcome reception		
19:30	Bus departure to hotels		

Tuesday Poster session

INFORMATION ON THE INTERIOR OF MARS, THE EARTH AND VENUS FROM ORBITERS AROUND THESE TERRESTRIAL PLANETS.	Dehant, V.	Royal Observatory of Belgium
Insight Into the Interior Structure of Mars from Forced Nutations	Rivoldini, A.	Observatoire Royal de Belgique
The Spinel-Perovskite Phase Transition in the Martian Mantle.	Michel, N.	Université de Toulouse, UPS, CESR
Pressure dependence of the viscosity: influence on the thermal evolution for planets of Mars- and Earth-size	Noack, L.	German Aerospace Center (DLR)
Viscosity variations due to the influence of partial melt: implications for the thermal evolution of Mars and Earth	Plesa, A.	German Aerospace Center (DLR), Institute of Planetary Research
Mass-Radius Relations of Earth-like Planetary Bodies	Wagner, F.	German Aerospace Center (DLR)
Chaotic terrains and what they tell us about the geothermal gradients on Mars and Earth	Schumacher, S.	ESA-ESTEC
COMPARATIVE TDEM SOUNDING STUDY OF MARTIAN AND EARTH'S FROZEN ROCKS	Ozorovich, Y.	Space Research Institute
Reflection Systems for Planetary Geology: First ExoGeoLab Tests at ESTEC	Batenburg, P.	TU Delft/ ESTEC

Tuesday 12 May 2009

Geology, surface chemistry and mineralogy

chair: Basilevski, Rossi, Pinet

09:00	Comparative View of Geology of Venus, Earth, and Mars	Basilevsky, A.	Vernadsky Institute of Geochemistry and Analytical Chemistry
09:30	Tectonic Rifting on Earth, Mars, and Venus	Hauber, E.	DLR
09:50	Volcanic Rises and Upwelling: Hotspots on Venus, Earth and Mars	Stofan, E.	Proxemy Research/UCL
10:10	The Geologic Evolution of Mars: Episodicity of Resurfacing Events and Ages from Cratering Analysis of Image Data	Neukum, G.	Freie Universität Berlin
10:30	Coffee break		
11:00	Impact cratering on terrestrial planetary bodies	Ivanov, B.	Russian Academy of Sciences
11:30	Polar and Mountain Cold Trapping, "Glacial" Flow, and Glacial Processes and Landforms Involving Volatiles on Mars.	Kargel, J.	University of Arizona
11:50	Analogy Between Gullies On Mars And On Earth: What Similarities? What Differences?	Mangold, N.	CNRS/LPG Nantes
12:10	FORMATION OF CHAOTIC TERRAINS ON MARS BY MELTING OF SUB-SURFACE ICE:MARS AND EARTH	Zegers, T.	Utrecht University
12:30	Comparative views of valley networks on Mars from Mars Express data and on Earth	Ansan, V.	LPGN - Université de Nantes-UMR6112
12:50	Lunch break		
13:50	The crust of Mars	Poulet, F.	IAS
14:10	WIDESPREAD OCCURRENCE OF CARBONATE ON MARS: IMPLICATIONS FOR ATMOSPHERIC EVOLUTION	Palomba, E.	IFSI-INAF
14:30	Discussion		

Tuesday Poster session

Evidences of karst landforms and processes on an evaporite dome in east tithonium chasma (Mars).	Baioni, D.	Urbino University
The enhancement of Mars (MOLA) and Earth (SRTM) digital elevation data using geophysical filtering and image processing techniques.	Chacksfield, B.	British Geological Survey
Relief-Forming Potential of Terrestrial Planets Predicted by the Wave Planetology	Kochemasov, G.	IGEM RAS
An Automated Classification of Mawrth Vallis.	Koenders, R.	Delft University of Technology
An impact crater detection tool (ICDY) applied to Martian and terrestrial digital elevation models	Krøgli, S.	University of Oslo
Potential Implications of a Common Origin for Outflow Systems on Venus, Mars, and the Moon	Leverington, D.	Texas Tech University
Sub-surface melting in ice on Mars	Möhlmann, D.	DLR
Radar subsurface sounding over the putative frozen sea in Cerberus Palus, Mars	Orosei, R.	Istituto Nazionale di Astrofisica
Alluvial Fan EuroGeoMars Observations and GPR Measurements	Peters, S.	VU Amsterdam/ ESTEC
Image Analysis: Tools for the recognition and characterization of planetary surface features	Saraiva, J.	CERENA / IST
Polygonal Patterns on Mars and Earth: Automated Characterization as a Basis for Comparison	Saraiva, J.	CERENA / IST
Mars Planetary Mapping Pilot Project	Tragheim, D.	British Geological Survey
SOME FEATURES OF THE EARTH, VENUS AND MARS GLOBAL RELIEF.	Lazarev, E.	Sternberg State Astronomical Institute
METHANE AS A POSSIBLE INHIBITOR OF SUBSURFACE OXIDATION BY ATMOSPHERIC HYDROGEN PEROXIDE AT MARS	Chassefiere, E.	LATMOS
Emissivity Measurements of Martian and Venusian Analogue Minerals	Maturilli, A.	DLR - German Aerospace Center
Possible Surface Anomalies on the Northern Hemisphere of Venus as Observed	Arnold, G.	WWU Münster
A hydrothermal system on Mars; detection and geological context	den Haan, J.	Utrecht University
Geochemistry of Utah Morrison Formation from EuroGeoMars Campaign	Borst, A.	VU Amsterdam
Geology and Geochemistry Highlights from EuroGeoMars MDRS Campaign	Foing, B.	ESA

Conditions for life

chair: Gibson, Javaux

15:00	Early life on Earth and its geological context: relevance for Mars	Westall, F.	CNRS-Orléans
15:30	Coffee break		
16:00	Effects of asteroid and comet impacts on the Atmospheric evolution of Earth, Mars and Venus.	Dehant, V.	Royal Observatory of Belgium
16:20	TERRESTRIAL FIELD RESEARCH ON ORGANICS AT MARS ANALOG SITES	Ehrenfreund, P.	Leiden Institute of Chemistry
16:40	Extreme life and implications for Astrobiology	Amils, R.	Centro de Astrobiología (INTA-CSIC)
17:10	Habitats above planetary surfaces: earth, Mars, Venus	Muller, C.	BIRA-IASB-BUSOC
17:30	Discussion		
18:00	Poster session		
19:45	Bus departure to hotels		

Tuesday Poster session

	On the possible transfer of microorganisms from Venus to Earth	Chandra, W.	Cardiff University
	GLACIOPANSPERMIA: SEEDING THE TERRESTRIAL PLANETS WITH LIFE?	Houtkooper, J.	Justus-Liebig-University

Wednesday 13 May 2009**Atmospheric chemistry and clouds**

chair: Crisp, Bezar

09:00	tbc		
09:30	Differences and similarities between the martian and terrestrial ozone layers	Lefèvre, F.	LATMOS
09:50	Oxygen Airglow Emissions on Venus and Mars	Migliorini, A.	IASF-INAf
10:10	Clouds in the terrestrial planets	Montmessin, F.	CNRS/UVSQ/IPSL
10:40	Mesospheric clouds on Mars and on the Earth	Määttänen, A.	LATMOS
11:00	Coffee break 25 min		
11:25	PHOENIX LIDAR OBSERVATIONS OF DUST, CLOUDS, AND PRECIPITATION ON MARS AND EARTH	Whiteway, J.	York University
11:45	Discussion		
12:00	End of session		

Thursday Poster session

	THE ORIGIN OF METHANE IN MARTIAN ATMOSPHERE : THE HYPOTHESIS OF METASTABLE METHANE	Chassefiere, E.	LATMOS
	H ₂ O and H ₂ O ₂ Mapping on Mars near Summer Solstice: Further Evidence for Heterogeneous Chemistry	Encenaz, T.	Paris Observatory
	Quantifying photochemical catalytic cycles near the Martian atmospheric surface	Grenfell, J.	Technische Universität Berlin
	Formaldehyde in the solar system: earth, Mars, Venus and other objects	Muller, C.	BIRA-IASB, B.USOC
	Hydroxyl Detection on Venus and Earth, and Implications for Ozone	Migliorini, A.	IASF-INAf, Rome
	Comparison of O ₂ IR and NO UV Night Airglow Variations on Mars and Venus	Brecht, A.	University of Michigan
	Observations of night OH in the mesosphere of Venus and Earth: A comparative planetology perspective.	Parkinson, C.	University of Michigan
	SENSITIVITY STUDY OF WATER VAPOR TOTAL COLUMN MEASUREMENTS USING ELODIE ARCHIVE AT OBSERVATOIRE DE HAUTE-PROVENCE FROM 1994 TO 2004	Alkasm, S.	LATMOS
	Effects of different atmospheric dust loading on the retrieval of surface albedo of Mars.	Zinzi, A.	Università di L'Aquila
	Sulfuric Acid in the Clouds of Terrestrial Planets.	McGouldrick, K.	Denver Museum of Nature & Science
	Updating CO ₂ spectroscopic line list using Mars and Venus spectra	Vandaele, A.	Inst for Space Aeronomy

Climate and Atmospheric Dynamics

chair: Titov

12:00	Dynamics and Circulation Regimes of the Terrestrial Planets: The Big Picture?	Read, P.	University of Oxford
12:40	Modeling the climate systems of the terrestrial planets : building virtual planets	Forget, F.	LMD, IPSL
13:00	Lunch break		
14:00	The mechanism of superrotation: comparing Venus and Titan with General Circulation Models	Lebonnois, S.	LMD/IPSL/Univ. Paris 6/CNRS
14:20	The mesospheres of Earth and Mars	Paul, H.	MPS
14:40	Climatological Comparisons between the Earth and Venus Upper Atmospheres	Keating, G.	The George Washington University
15:00	Comparative mesoscale meteorology : the case of Mars and the Earth	Spiga, A.	LMD [IPSL/UPMC]
15:20	Atmospheric Angular Momentum variations of Earth, Mars and Venus	Dehant, V.	Royal Observatory of Belgium
15:40	THE VENUSIAN VORTEX AND ITS POSSIBLE RELATIVES	Piccioni, G.	INAF-IASF
16:00	Coffee break		
16:30	Vortex Circulation on Venus	Limaye, S.	University of Wisconsin
16:50	Venus Lightning: Comparison with Terrestrial Lightning	Russell, C.	University of California, Los Angeles
17:10	Glaciations on Mars: response to orbital variations inferred from climate modelling, and comparison with Earth.	MADELEINE	Laboratoire de Météorologie Dynamique
17:30	Discussion		
18:00	End of session		
18:30	Bus to Boat/Dinner		
19:00	Boat departure		
22:30	Bus back to hotels		

Tuesday Poster session

Thermospheric Modeling of Mars and Venus	González-Galindo, F.	Laboratoire de Météorologie Dynamique, CNRS
THERMAL STRUCTURES OF VENUS AND MARS ATMOSPHERES AS OBSERVED BY VIRTIS INSTRUMENTS	Grassi, D.	IFSI-INAF
Wave-mean flow interactions and gravity waves in the atmospheres of Mars and Earth.	Medvedev, A.	Max Planck Institute for Solar System Research
Equatorial semiannual oscillations in the atmospheres of Mars and Earth	Kuroda, T.	Max Planck Institute for Solar System Research
Dynamics and Circulation of the Venus Atmosphere	Mendonca, J.	University of Oxford
Coherent Structures in Planetary Polar Vortices: A Laboratory View	Montabone, L.	The Open University
Thermal wind in the atmospheres of Venus and the other planets.	Piccialli, A.	Max Planck Institute for Solar System Research
Transport barrier in the middle atmosphere of Venus	Titov, D.	Max Planck Institute for Solar System Research
Mesospheric Temperature Measurements on Mars and Venus by Observations of non-LTE Emission of	Kroetz, P.	University of Cologne
Interferometric Measurements of Venus Mesospheric Wind	Sagawa, H.	Max Planck Institute for Solar System Research
Latitudinal and local time distribution of the O ₂ infrared nightglow and O density in the lower thermosphere	Soret, L.	ULG
SATELLITE-DERIVED CLOUD MOTION WINDS IN THE POLAR REGIONS OF EARTH AND MARS	Santek, D.	University of Wisconsin
Ultra-high Resolution Heterodyne Spectroscopy as a Tool to Study Atmospheric Dynamics of the Terrestrial Planets	Sonnabend, G.	University of Cologne
Ground-Based Wind Measurements at Venus Cloud Tops	Widemann, T.	Obs. Paris-Meudon
A high resolution mesoscale model for Mars. Preliminary results.	Zinzi, A.	Università di L'Aquila
Changes in the Martian surface composition related to water cycle: evidence for atmospheric wave phenomena	Evdokimova, N.	Ru

Thursday 14 May 2009

Aeronomy and solar wind interaction

Chair: Nagy, Witasse

09:00	The Solar Wind Interaction with Venus, Earth, and Mars: A Tutorial	Cravens, T.	University of Kansas
09:40	Solar Wind Interaction with Venus and Mars	Ma, Y.	IGPP, UCLA
10:00	Do Magnetospheres Really Shield Planetary Atmospheres from Solar Wind Interaction-Related Erosion?	Luhmann, J.	University of California
10:20	Venus, Earth, Mars: Comparative Ion Escape Rates	Barabash, S.	Swedish Institute of Space Physics
10:40	Coffee break		
11:10	Imaging the Atmospheric Escape from Venus, Earth and Mars	Brandt, P.	The Johns Hopkins University Applied Physics
11:30	Airglow and aurora	Gerard, J.	Université de Liège
11:50	CARBON DIOXIDE NON-LTE EMISSIONS IN THE UPPER ATMOSPHERES OF MARS, VENUS AND EARTH	Drossart, P.	Observatoire de Paris
12:10	Modelling the atmospheric CO ₂ 10-um laser emission at high spectral resolution in Mars and Venus	Lopez-Valverde, M.	Instituto de Astrofisica de Andalucia / CSIC
12:30	NON-LTE CO LIMB EMISSION AT 4.7 UM IN THE UPPER ATMOSPHERE OF VENUS, MARS AND EARTH: OBSERVATIONS AND MODELLING	Gilli, G.	Instituto de Astrofisica de Andalucia / CSIC
12:50	Lunch break		
14:00	Model Simulations of the Upper Atmospheres of Venus and Mars: Processes	Bougher, S.	University of Michigan
14:20	Exosphere Temperature Variability at Earth, Mars and Venus	Forbes, J.	University of Colorado
14:40	Radiative transfer of the oxygen 130 nm triplet in the atmosphere of Mars and Venus.	Barthelemy, M.	Laboratoire de Planetologie de Grenoble
15:00	Comparative Aeronomy: Ionospheric Production for Terrestrial Planets	Mendillo, M.	Boston University
15:20	Ion transport in the upper ionospheres of Mars and Venus	Fraenz, M.	MPI fuer Sonnensystemforschung
15:40	Coffee break		
16:10	Ionospheric photoelectrons: comparing Earth, Venus, Mars and Titan	Coates, A.	UCL-MSSL
16:30	Observations of the effects of meteors on the ionospheres of Venus, Earth and Mars	Withers, P.	Boston University
16:50	Comparative study of the ion cyclotron waves at Mars, Venus and Earth	Wei, H.	University of California Los Angeles
17:10	Comparative Automated Multi-Dataset Analysis of the Martian and Venusian time-variable plasma environments	André, N.	CDPP/CESR, CNRS/Universite Paul Sabatier,
17:30	Discussion		

18:00	Thursday Poster session		
	Solar wind parameters throughout the heliosphere from multi-spacecraft measurements	Opitz, A.	CESR (CNRS-UPS)
	SIMULATED SOLAR WIND INTERACTION WITH THE MARTIAN ENVIRONMENT	Chanteur, G.	CNRS
	Comparative Investigation of the terrestrial and venusian interface with the shocked solar wind: kinetic modeling and observations by cluster and venus express	Echim, M.	Belgian Institute for Space Aeronomy and Institute for Space Sciences Bucharest
	Intercomparison of Global Models and Measurements of the Martian Plasma Environment	Holmstrom, M.	Swedish Institute of Space Physics
	THE ATMOSPHERIC ORIGIN OF COLD ION ESCAPE FROM MARS	Lundin, R.	Swedish Institute of Space Physics
	Comparative investigations of planetary electromagnetic environments	Ferencz, C.	Eotvos University
	Particle circulation model in the Martian/Venus environment: Atmospheric Sputtering	Rinaldi, G.	INAF
	Hot Hydrogen Ion Precipitation in the Martian Ionosphere in the Vicinity of	Parkinson, C.	University of Michigan
	Hot Oxygen Atoms in Venus Exosphere	Gröller, H.	Austrian Academy of Sciences
	The ultraviolet nitric oxide emission in the nightside atmospheres of Venus and Mars	Cox, C.	Université de Liège
	Modelling non-LTE emissions by CO ₂ at 4.3-um in the upper atmospheres of the terrestrial planets	Lopez-Valverde, M.	Instituto de Astrofísica de Andalucía / CSIC
	Some aspects of Venus, Earth and Mars upper atmosphere superrotation.	Bespalov, P.	Institute of Applied Physics, Russian Academy of Sciences
	Energy Per Ion Pair In Planetary Upper Atmospheres	Simon, C.	Belgian Institute for Space Aeronomy
	Ionospheric Photoelectrons at Venus – A Preliminary Statistical Review	Tsang, S.	Mullard Space Science Laboratory, UCL
	Mars and Venus: An Observed Interaction Region Near the Top of the Ionosphere	Winningham, J.	Southwest Research Institute
	THE MAIN FEATURES OF THE MARTIAN AND VENUSIAN METEOR YEARS: AN EARTH-ORIENTED	Christou, A.	Armagh Observatory
	Permanent layer in the Venus lower ionosphere	Gavrik, A.	Kotelnikov Institute of Radio Engineering and Electronics of RAS
	How to derive neutral density profiles from electron density measurements	Witasse, O.	European Space Agency
	Structure and dynamics of the ionopause of Venus	Angsmann, A.	MPI for Solar System Research
	The high latitude ionospheres of Venus and Earth at solar minimum	Wood, A.	Aberystwyth University
	An interoperable web-based service offered through the EuroPlaNet/IDIS Plasma Node usable for planetary plasma data exploitation and comparative studies: Application to the Martian and Venusian environments.	Andre, N.	CESR
	End of session		
19:45	Bus departure to hotels		

Friday 15 May 2009

Evolution

chair: Grinspoon, Lammer

09:00	The Divergent Evolution of Venus, Earth and Mars	Grinspoon, D.	Denver Museum of Nature & Science
09:40	Relationships Between the Atmospheric Composition and the Interior Structure and Dynamics of Mars – Venus –	Sotin, C.	Jet Propulsion Laboratory
10:00	Early evolution of Mars and the Earth: a reappraisal	Bibring, J.	IAS
10:20	The abundances and isotopic ratios of noble and light gases: Clues to the origin and evolution of Venus, Earth, and Mars	Baines, K.	Jet Propulsion Laboratory, California Institute of Technology
10:40	Coffee break		
11:10	Earth, Venus and Mars were developed on the same scenario: Evidence from geological and petrological data	Sharkov, E.	Institute of Geology of Ore Deposits, Petrography, Mineralogy and Geochemistry RAS
11:30	The stability of early Earth's nitrogen atmosphere	Lichtenegger, H.	Austrian Academy of Sciences
11:50	THE HYDROGEN CORONA OF EARTH, VENUS AND MARS, AND POSSIBLE IMPLICATION FOR ATMOSPHERIC EVOLUTION.	Bertaux, J.	LATMOS/CNRS
12:10	SOLAR FORCING AND THE EVOLUTION OF WATER ON EARTH, VENUS AND MARS	Lundin, R.	Swedish Institute of Space Physics
12:30	Discussion		
13:00	End of Session		
13:00	Lunch break		

Thursday Poster session

	The History of Water on Venus: a Scenario Accounting for Present Neon and Hydrogen Isotopic Ratios.	Gillmann, C.	IPGP
	Escape of Heavy Hot Atoms from Early Mars	Lammer, H.	Austrian Academy of Sciences
	The Expanded Upper Atmosphere of Early Mars and the Isotopic Fractionation of Carbon and Oxygen	Tian, F.	University of Colorado
	How was the Present-Day Martian Atmosphere Formed?	Gillmann, C.	IPGP
	Mantle Degassing and Atmospheric Evolution: An Application to Mars and Venus.	Morschhauser, A.	German Aerospace Center
	INVESTIGATION OF EXTREME SOLAR EVENTS BASED ON ACCELEROMETER DATA FROM LEO SATELLITES.	Krauss, S.	Austrian Academy of Sciences

Future missions

chair: Chicarro, Satoh

Preliminary session - to be confirmed

14:00	JAXA's plans for Mars exploration	Sato, T.	
14:20	Present status of Japanese Venus Climate Orbiter Planet-C in 2009	Nakamura, M.	Japan Aerospace Exploration Agency
14:40	NASA's plans for Mars exploration	McCuiston	
15:00	Overview of NASA's Flagship Class Venus Mission Study.	Balint, T.	Jet Propulsion Laboratory / California Institute of Technology
15:20	Russian plans for Mars and Venus	Korablev, O.	
15:40	Coffee break		
16:10	ESA's Cosmic Vision programme	Coradini, M.	
16:30	The European Robotic Exploration of the Planet Mars	Chicarro, A.	ESA-ESTEC
16:50	THE EUROPEAN VENUS EXPLORER : A MISSION FOR BETTER UNDERSTANDING THE CLIMATE EVOLUTION OF TERRESTRIAL PLANETS	Chassefiere, E.	LATMOS
17:10	Discussion		
17:30	End of Session		

Thursday Poster session

	Mission Architecture Trades for an ASRG-Enabled Discovery-Class Balloon Mission.	Balint, T.	Jet Propulsion Laboratory / California Institute of Technology
	FUTURE RADIOSCIENCE MISSIONS WITH LANDERS AND ORBITERS TO MARS AND OTHER TERESTRIAL	Dehant, V.	Royal Observatory of Belgium
	The SOIR Instrument - Results from Venus and possibilities for Mars	Drummond, R.	Belgian Institute for Space Aeronomy
	Advanced Mössbauer Spectrometer MIMOS II for ExoMars and other Missions	Klingelhöfer, G.	Johannes Gutenberg-Universität
	Raman spectroscopy for mineral and organic analysis on Mars within the ExoMars mission	Rull, F.	Centro de Astrobiología
	The Venus Exploration Analysis Group (VEXAG): Priorities for Future Venus Exploration	Stofan, E.	Proxemy Research/UCL
	Upcoming Science Activities in Support of ESA's ExoMars Mission	Vago, J.	European Space Agency
	The Cyborg Astrobiologist: Teaching Computers to Find Uncommon or Novel Areas of Geological Scenery in Real-	Wendt, L.	Freie Universität Berlin
	Venera D - Russian Mission to Venus	Zasova, L.	Russian Academy of Sciences, Space Research

17:30	Concluding remark	Saunders, S.
18:00	End of conference	
18:15	Bus to Schiphol (optional)	