Mars Science Workshop From Mars Express to ExoMars 27-28 February 2018 ESAC, Spain



Round Table

Slide 2

The set of th

Open Questions (I)



- New ideas are welcome for MEX future observations and science (D. Titov)
- Peculiar and repeated water ice "hole" in polar regions, no obvious reason Can elaborate models can explain it? (*M.Giuranna*)
- Reported: a double polar vortex in N.H which is very persistent (A.Sanchez-Lavega)
- Is there a well defined layer of enhanced w.vapour in the mesosphere? (M.Chaffin)
- Why there was a S-to-N increase in D/H ratio in 2017? (*T.Encrenaz*)
- What caused a 10% density decrease in EDL trajectory around 12 km? (B. Van Hove)

Open Questions (II)



- Looking for synergistic retrievals of water vapour from NIR + TIR with ACS (F.Montmessin)
- Can the temp be that cold at 140 km in the dayside? (S.Jimenez-Monferrer)
- How to use local measurements (heat flow) to improve a global model?
 (question posed to L. Parro)
- Reported: CH4 could be stored in CO2 and H2O ices due to their porosity (*M.A.Satorre*)
- Can atmospheric data reveal mud volcanoes/subsurface sediment mobilization? (van de Bergt)
- How to explain the lack of anticorrelation between ozone and w.vapour in the equator? Is the vertical distribution the solution? Uptake of HOx in clouds?

(F. Lefevre)

Open Questions (III)



- Where is the Martian methane in all my SOFIA-based observations? (S. Aoki)
- Are atmospheric searches appropriate to solve the methane mistery? *(Etiope)*
- What promotes local dust storms into global dust storms? (L.Montabone)
- Why the seasonal variations observed at high altitudes? (F.González-Galindo)
- What is the connection between local and global methane? And the actual background level of atmospheric methane? (J.Pla)
- I am a dust grain. How can I avoid a worldwide tour? (A.Spiga)



Workshop Closure

Slide 6

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European Space Agency

Workshop Closure Remarks



- **Presentations+pictures** online in the next few weeks
 - Please notify of any restriction/embargo/...
- **Abstracts** will also be submitted to ADS (best effort ...)
- **Certificates of Attendance** available at registration desk
- Please remove posters (today or tomorrow)

European Space Agency

Bus Transport



Tuesday,	8:15 - 9:00	$MONCLOA \rightarrow ESAC$
Tuesday,	18:30 – 19:00	$ESAC \rightarrow MONCLOA$
Wednesday,	8:15 – 9:00	$MONCLOA \rightarrow ESAC$
Wednesday,	<mark>19:15</mark> – 19:50	$ESAC \rightarrow MONCLOA$
	<mark>19:15</mark> – 19:50 – 20:30	$ESAC \rightarrow MONCLOA \rightarrow AIRPORT^*$
Thursday,	8:15 – 9:00	$MONCLOA \rightarrow ESAC$
Thursday,	<mark>13:30</mark> – 14:15	ESAC → AIRPORT* HOW MANY?
	14:30 – 15:10 – 15:45	ESAC → MONCLOA → AIRPORT* HOW MANY?

*Arrival to all Airport terminals (T123 \rightarrow T4)

TAXIS also available on request at registration desk

MEX-TGO MEETING, THURSDAY, MARCH 1



Thursday, 8:15* – 9:00 BUS MONCLOA – ESAC (*from Paseo Ruperto Chapí, <M> Moncloa)

Thursday, 9:15 – 11:00 **MEX/TGO Collaboration discussion**

- Introduction (10 min)
- Analysis of joint observation opportunities (20 min) A.Cardesin, B. Geiger.
- General discussion (slides from the participants, etc)

Thursday, 11:00 – 11:30 COFFEE BREAK

Thursday, 11:30 – 13:00 **MEX/TGO Collaboration discussion**

- Continuation (round table, ...)

Thursday, 13:00 – 13:15 CLOSURE.

Thursday, 13:30 – 14:30 LUNCH

Thursday, 13:30 – 14:15 **Bus1 ESAC – Airport** (direct to Terminals T123 and 4) Thursday, 14:30 – 15:10 – 15:45 Bus2 ESAC – Moncloa – Airport (via Madrid)

D. Titov. H. Svedhem.

Slide 9

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THANKS