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U003-27

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## Ground-based observations of the mesosphere and lower thermosphere : Coordinated campaigns with Venus Express

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Coordinated measurements with ground-based observations allow to (i) perform measurements not feasible by an orbiting spacecraft like Venus-Express or Akatsuki, (ii) obtain cross-validation and record different diagnostics of similar phenomena, (iii) obtain simultaneous measurements sampling a large range of altitudes and (iv) improve the temporal baseline on time-varying phenomena. The 2010 coordinated campaign was supported by several international teams from the ground : Ohtsuki et al. (IRTF/CSHELL, 1.27  $\mu\text{m}$ ), Iwagami et al. (IRTF/CSHELL, 1.7-2.3  $\mu\text{m}$ ), Young et al. (IRTF/SpeX, 2.26-2.52  $\mu\text{m}$ ), Sornig et al. (Kitt Peak/THIS,  $\sim 10$   $\mu\text{m}$ ), Livengood et al. (IRTF/HIPWAC,  $\sim 10$   $\mu\text{m}$ ), Bailey et al. (AAT/IRIS2, APO/ARCES, 1.1-2.4  $\mu\text{m}$ ), Sandor et al. (JCMT, 330-360 GHz CO, T(z), winds), Limaye et al. (2-m HCT/ HFOSC 2.3  $\mu\text{m}$ ), Widemann et al. (CFHT/EsPADOnS, 0.35-1.05  $\mu\text{m}$ ), Slanger et al. (10-m Keck I/HIRES, APO, nIR O<sub>2</sub> and Vis. airglow), Jessup et al. (Hubble Space Telescope/STIS), Encrenaz et al. (IRTF/EXES, 7-8  $\mu\text{m}$ ). We will discuss science results obtained through coordination with VEx, and mention future ground-based instrumentation esp. in Japanese facilities. We will briefly introduce new balloon experiments proposed to observe Venus continuously in the near-IR, as well as specific projects in coordination for the observation of next year's Venus solar transit.

Keywords: Planetary Science, Planetary Atmospheres, Venus Atmospheric Dynamics, High Resolution Spectroscopy, Visible, Infrared, Millimeter-wave, Venus Atmospheric Chemistry