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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 um), Iwagami et al. (IRTF/CSHELL, 1.7-2.3 um), Young et al. (IRTF/SpeX, 2.26-2.52 um), Sornig et al. (Kitt Peak/THIS, ~10 um), Livengood et al. (IRTF/HIPWAC, ~10 um), Bailey et al. (AAT/IRIS2, APO/ARCES, 1.1-2.4 um), Sandor et al. (JCMT, 330-360 GHz CO, T(z), winds), Limaye et al. (2-m HCT/ HFOSC 2.3 um), Widemann et al. (CFHT/EsPADOnS, 0.35-1.05 um), Slanger et al. (10-m Keck I/HIRES, APO, nIR O2 and Vis. airglow), Jessup et al. (Hubble Space Telescope/STIS), Encrenaz et al. (IRTF/EXES, 7-8 um). 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.

 \pm – \neg – \vdash : Planetary Science, Planetary Atmospheres, Venus Atmospheric Dynamics, High Resolution Spectroscopy, Visible, Infrared, Millimeter-wave, Venus Atmospheric Chemistry

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