

# Venus III: The Atmosphere, Climate, Surface, Interior and Near-Space Environment of an Earth-like Planet

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An overview is given of the new knowledge that has been acquired about the planet Venus since the publication of the books Venus I (Eds. D.M. Hunten, L. Colin, T. Donahue and V. Moroz, University of Arizona Press, 1982) and Venus II (Eds. S.W. Bougher, D.M. Hunten, and R.J. Phillips, University of Arizona Press, 1997). It is proposed that this new knowledge should form the basis for a new volume, Venus III. Although stimulated by the recent successful Venus Express (VEx) mission, and timed to incorporate results from the Japanese Venus Climate Orbiter (VCO, also known as Planet-C and *Akatsuki*), which is scheduled to arrive at the planet in December this year, new contributions from any source including theory, models, and future mission planning would be included, and authorship open to all subject only to the usual editorial process including independent reviews.

A suitable timescale might be to aim for publication in summer of 2013, after the formal end (as presently defined) of both current missions, VEx and VCO, and a long time before anything else currently planned could reach Venus. This would require that all manuscripts are final by Dec 2012, which is 16 years after Venus II (which itself was 14 years after Venus I). This paper outlines a *very preliminary* list of possible chapters and authors; it is hoped that the Venus global community will contribute ideas for additional or different chapters ((Note that Venus I had 30 chapters covering 1143 pages, and Venus II had 50 chapters in 1362 pages, and a CD) and propose themselves or others as authors. The University of Arizona series is defunct but Cambridge University Press has expressed an interest in publishing the volume. The format would be similar to 'Jupiter' (2004; paperback 2007, ed. F Bagenal, T Dowling and W McKinnon), which had 748 large-format pages covering 27 chapters, 2 appendices (Maps and Parameters), and a CD.