

## SESSION I

### OPERATIONAL SYSTEMS TO DERIVE SATELLITE-TRACKED WINDS

*Chairperson: Hans Peter Roesli*

Looking back on the three Wind Workshops so far and the one reported in these Proceedings in particular, a small but very positive signal as regards the progress in operational procedures of wind extraction can be identified. Quality, quantity and coverage of extracted wind vectors are slowly improving while at the same time new satellite systems have been introduced (GMS-5, GOES-8/9). Efforts of standardisation allow for a better assessment of improvements. Tracking of water vapour features and higher spatial and/or temporal resolution as well as automated production processes are spreading. Forecast-independent tracking and height assignment, a further step towards fully grown-up operational systems, seems to be imminent.

During this session eight papers outlined the merits and deficiencies of the operational extraction systems in use and the planned improvements in the near future. T. Tokuno outlined the progress made with the change-over from GMS-4 to GMS-5, which in particular has introduced WV winds. S. Nieman as well as R. Walter outlined and illustrated the steady improvement notwithstanding the trend towards a fully automated system and the phasing in of the new GOES generation. R. C. Bhatia highlighted the important effort for better quality (e.g. determination of cross-equatorial flow) in an extremely sensitive region as is the Indian Ocean. J. Xu and J. Le Marshall offered alternative approaches to wind extraction from GMS data. The former described "light" (PC-compatible) but very efficient algorithms in use in China, the latter ably demonstrated the positive impact of high spatial-temporal wind fields on the Australian NWP products. M. Rattenborg showed the merits of, and initial difficulties with, the wind products from the new METEOSAT ground segment, which has had to take over from the old system with a minimum parallel runs. J. Schmetz discussed the imminent introduction of METEOSAT high resolution low-level winds, pointing to the importance of some particular problems such as a correct height assignment with respect to the boundary layer and a necessity for shorter image intervals over land.

In conclusion, and looking to the other sessions, it seems to me that the operational systems have to continue their strive for higher spatial and temporal density, as its impact on NWP is well proven. In order to cope with the considerably higher data rate the trend towards fully automated and only weakly forecast-dependent extraction systems should be continued and be accompanied by the inclusion of quality markers in the disseminated extraction products.

*Hans Peter Roesli, Chairperson of Session I  
SMA, Locarno*