

THE INTERNATIONAL CONFERENCES OF ALPINE METEOROLOGY (ICAM): CHARACTERISTICS AND TRENDS FROM A 55-YEAR-SERIES OF SCIENTIFIC COMMUNICATION

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Abstract: Some general information is given about origin, conduct and written documentation concerning the full series of 29 international conferences on Alpine meteorology (ICAM) between 1950 and 2007. The slowly varying format of interactive scientific communication becomes transparent. As most current ICAM participants joined the series only during its later half, such basic hints are considered to be of a general value to the entire community.

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1. THE ORIGIN OF ICAM

The first ICAM took place in 1950 in Italy due to the personal initiative of Mario Bossolasco, then affiliated with the Italian Geophysical Institute Milano (cf. Table 1 and reference therein). The communications were published in any of the languages Italian, English, French, or German. The initiative took place five years after the end of World War II with a clear vision towards Alpine meteorology being placed at the heart of geophysical inter-disciplinarity and constituting a prototype for international cooperation (according to the opening statement by Bossolasco). The topics presented included rotating tank experiments with obstacles (Fultz, USA), Föhn studies in Italy (Bossolaco, I), a synoptic investigation of Alpine precipitation (Striffling, F), and stratospheric flows above Europe (Hovmöller, S).

The first ICAM produced sufficient momentum so that the second and third realization were organized in Austria (1952; 128 participants) and Switzerland (1954; 129 participants), respectively. General reports and shorter abstracts of the oral presentations were published in the journal *Wetter und Leben* about six months after the conference (cf. Table 1). A personal spirit of friendship among colleagues and the very limited resources during the first post-war decade shine through the reports.

2. THE CONDUCT OF ICAM THROUGH FIVE ALPINE CYCLES

As outlined in Table 1, the other three Alpine countries France, Germany, and (then) Yugoslavia followed the founding trio, before the second cycle started in 1962, again in Italy. Like a clockwork the third cycle began in 1974, the fourth in 1986, while the fifth will be completed with the 30th ICAM to take place in Germany in 2009. A nine-months-shift from September of even years to late spring of odd years took place in 2003 to establish an alternating sequence with the Mountain Meteorology conference series of the American Meteorological Society and to maintain the trans-Atlantic cooperation, which had strongly developed during the conduct of the Mesoscale Alpine Programme (1995-2005; cf. Volkert and Gutermann, 2007).

A cursory inspection of the proceeding volumes (as much as the author could get hold of a copy) reveals a number of general points: (i) until 1976 proceedings were published well after the conference, often in quite elaborate edited layouts, (ii) from 1978 volumes of extended abstracts were distributed at the conference to assist all participants to select presentations of highest personal interest, (iii) in 1978 and 1990 Switzerland produced both on-site and resumé versions, (iv) until the 1970s presentations were limited to oral ones, leading to a high number of rejections (cf. Introduction to *Ann. Meteorol.* **5**, 1970), (v) a large number of poster presentations and the exclusive use of English became regular practise during the late 1980s, (vi) the large mountain meteorology field campaigns ALPEX (1982), PYREX (1990), and MAP (1999) are well reflected in contributions to the following ICAMs, (vii) from 2003 onwards submission of extended abstracts via the internet much eased their collection, but a printed volume proved to be of unmatched value to the participants during the event, especially in comparison with the publication on a compact disc (CD).

Table 1: Time series of ICAMs circling five times through half a dozen of Alpine countries with year & number, country code, location and source of proceedings or volumes of extended abstracts. Sources for entries in the last column: *Annalen der Meteorologie* Nr. 30, pp. 369-370 (up to 1994); from internet searches for later years.

year	cou.	location	proceedings	year	cou.	Location	proceedings
1950 1 st	I	Milano & Torino	Geof. pura e appl. 17 , 1950, 81-245	1980 16 th	F	Aix-les-Bains	Soc. Météorol. de France, Boulogne-Billancourt, 1980, 462 pp.
1952 2 nd	A	Obergurgl	Wetter und Leben, 5 , 1953, 1-54	1982 17 th	D	Berchtesgaden	Ann. d. Meteorologie Nr. 19, 1982, 293 pp.
1954 3 rd	CH	Davos	Wetter und Leben, 6 , 1954, 187-211	1984 18 th	Y (Cro)	Opatija	Zbornik met. hidrolog. radova 10 , 1984, 345 pp.
1956 4 th	F	Chamonix	La Météorologie IV , 1957, 111-377	1986 19 th	A	Rauris	Österr. Ges. f. Meteorol., Vienna, 1987, 457 pp.
1958 5 th	D	Garmisch	Bericht Dt. Wetterdienst Nr. 54, 1959, 302 pp.	1988 20 th	I	Sestola	Servizio Meteorol. Ital., Roma 1988
1960 6 th	Y (Slo)	Bled	Hydromet. Inst. Report, Beograd, 1962, 514 pp.	1990 21 th	CH	Engelberg	Reports MeteoSwiss Nr. 48, 1990, 437 pp. & Nr. 49, 1991, 135 pp.
1962 7 th	I	Sestriere	Geofisica e Meteorologia II , 1963, 303 pp.	1992 22 th	F	Toulouse	Soc. Météorol. de France, 1992, 452 pp. & La Météorologie VII , 45 , 1992, 1-64
1964 8 th	A	Villach	Carinthia II , special issue no. 24, Vienna, 314 pp.	1994 23 th	D	Lindau	Ann. d. Meteorologie Nr. 30, 1994, 370 pp.
1966 9 th	CH	Brig & Zermatt	Reports MeteoSwiss Nr. 4, 1967, 366 pp.	1996 24 th	Slo	Bled	Hydrometeo. Inst. of Slovenia, Ljubljana, 1996, >303 pp.
1968 10 th	F	Grenoble	La Météorologie, special issue, 1969, 464 pp.	1998 25 th	I	Torino	CIMA proceedings, Torino, 1998, > 272 pp.
1970 11 th	D	Oberstdorf	Ann. d. Meteorologie Nr. 5, 1971, 300 pp.	2000 26 th	A	Innsbruck	Österr. Beitr. Meteorol. Geophys., issue 23, 2000, on CD
1972 12 th	Y (BH)	Sarajevo	Zbornik met. hidrolog. radova 5 , Beograd, 1973, 375 pp.	2003 27 th	CH	Brig	Online: http://www.map.meteoswiss.ch/map-doc/icam2003/0th.index.htm
1974 13 th	I	St. Vincent (Valle d'Aosta)	Riv. di Geofisica, special edition, 1975, 201 pp.	2005 28 th	Cro	Zadar	Online: http://www.map.meteoswiss.ch/map-doc/icam2005/
1976 14 th	A	Rauris	Arb. ZAMG Nr. 32 & 33, Vienna, 1978	2007 29 th	F	Chambéry	Online: http://www.cnrm.meteo.fr/icam2007/
1978 15 th	CH	Grindelwald	Reports MeteoSwiss Nr. 40, 1978, 332 pp. & Nr. 41, 1979, 63 pp.	2009 30 th	D	'Black Forest region' (planned)	yet to be determined

3. THE FUTURE OF ICAM

The steady increase of submitted papers and of participants over the past four years (now exceeding 200) indicates that ICAM remains firmly established as the European counterpart to the shorter series of the AMS Mountain Meteorology conferences. The sustained interest in mountain meteorology topics calls for an enlargement of host countries after 2009. The International ICAM committee (IIC) is about to adapt its terms of reference to invite offers from further interested countries like the UK and Norway. Such a widening of the perspective is considered to be fully in line with the Bossolasco's vision at the start of ICAM in 1950.

Furthermore it is suggested that IIC organizes a full collection of the distributed conference proceedings at one (or several) institutions to ease a more systematic survey of problems, techniques, and solutions as they were documented in a preliminary fashion prior to the frequently occurring formal publication in peer-reviewed journals. A survey focussing on student contributions could quantify over time the considerable educational effect of an established conference series like ICAM for the respective coming generation of scientists. A systematic inspection of co-authoring teams could elucidate how inter-institutional and international cooperation developed over the years.

REFERENCE

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