BAROMETRIC COEFFICIENTS FOR DIFFERENT NEUTRON MULTIPLICITIES ACCORDING TO ESO NM DATA (ISRAEL) AND DATA OF UNIVERSITY "ROMA TRE" NM (ITALY)

L.I. Dorman (1,2), N. Iucci (3), A. Sternlieb (1), G. Villoresi (3), I.G. ZUKERMAN (1)

(1) Israel Cosmic Ray Center and Emilio Segre' Observatory, affiliated to Tel Aviv University, Technion and Israel Space Agency, Israel; (2) IZMIRAN, Russian Academy of Science, Troitsk, (3) Dipartimento di Fisica "E. Amaldi", Università "Roma Tre", Rome, Italy; izuker@ccsg.tau.ac.il

On the basis of hourly data obtained by NM of Emilio Segre' Observatory (height 2025 m above s.l., cut-off rigidity for vertical direction 10.8 GV) and by NM of University "Roma Tre" (about sea level, cut-off rigidity 6.7 GV) we determine barometric coefficients both stations for total neutron intensity and for multiplicities \( m = 1, m = 2, m = 3, m = 4, m = 5, m = 6, m = 7 \) and \( m = 8 \). We determine also for each hour the effective multiplicity \( <m> \) for \( m = 8 \) and estimate the barometric coefficient for \( <m> \) for both NM. We used hourly data from June 1998 up to April 2001, and we excluded periods when above the NM of Emilio Segre' Observatory was snow. We compare obtained results with expected according to the theory of meteorological effects for total neutron component and for neutron multiplicities.