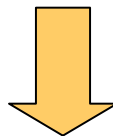


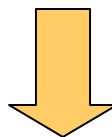
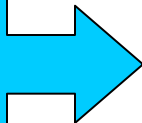
National Institute of Meteorology and Hydrology of Bulgaria

Coupled Aladin-ISBA-Modcou models used for hydrologic modeling and forecast

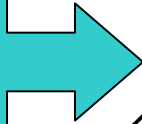
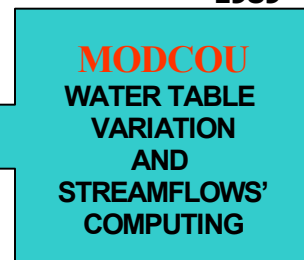
SHORT RANGE ATMOSPHERIC MODEL



SURFACE SCHEME (Noilhan J. et J. F. Mahfouf, 1995)

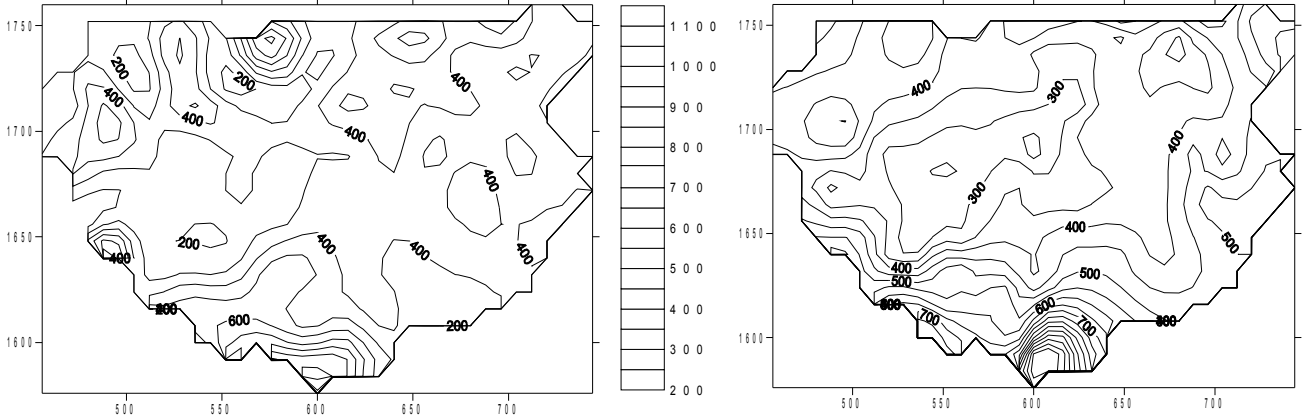


DISTRIBUTED HYDROLOGICAL AND HYDRO-GEOLOGICAL MODEL Ledoux E., G.Girard, G.Marsily, 1989



REAL TIME MONITORING OF THE SNOW COVER, SOIL MOISTURE AND STREAMFLOWS, AND 48 h HYDROLOGICAL FORECAST

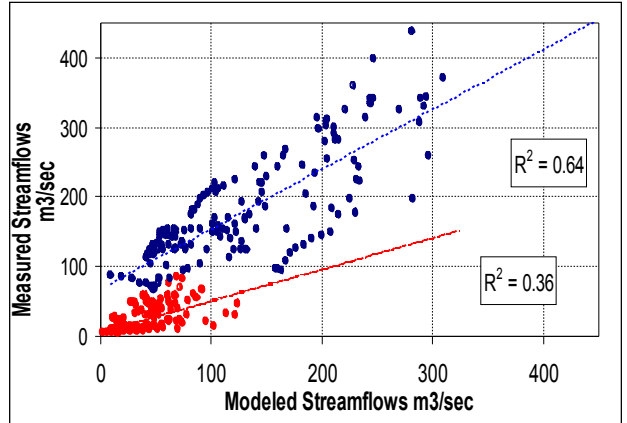
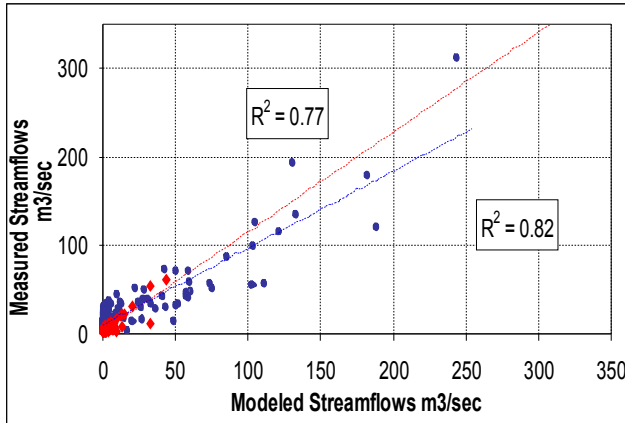
RESULTS COMPARISON : 1. ALADIN ACCUMULATED 5 MONTHS PRECIPITATION (on the right) VERSUS MEASURED PRECIPITATION FIELD (on the left) in mm



2. HYDROLOGIC MODELING USING MEASURED PRECIPITATION FIELDS

NOT ANTHROPOGENIZED
WATERSHEDS: 0.8xE3 km²

ANTHROPOGENIZED
WATERSHEDS: 21xE3 km² ; 5.5xE3 km²



3. HYDROLOGIC MODELING AND FORECAST USING ALADIN PRECIPITATION FIELDS

SOIL MOISTURE VARIABLE IS MODIFIED EVERY 48 h BY A SURFACE SCHEME RUNNING AT THE SAME TIME BUT USING MEASURED PRECIPITATIONS

