In this paper, the problem of Clutter Map Constant False Alarm Rate (CMAP-CFAR) detection is considered for a distributed detection with two and three sensors and a data fusion centre. We assume that the sensors are identical and that the target is a fluctuating according to the Swerling I model, embedded in a white Gaussian noise of unknown variance. Closed form expressions of the global probabilities of detection and false alarm for the 'AND', 'OR' and 'MAJORITY' rules and the Adaptive Detection Threshold are determined and the performance of the system is investigated and analyzed