Experimental dataset on a large-scale urban drainage physical facility

The present dataset contains the results from the test carried out at a large-scale urban drainage facility located in the Hydraulics Laboratory of the Centre of Technological Innovation in Construction and Civil Engineering (CITEEC) at the University of A Coruña (Spain) within the scope of the project **SATURNO - Early warning against pluvial flooding in urban areas** [PID2020-118368RB-I00]. The main goal of the project SATURNO is to establish a robust methodology for the development and implementation of operational Early Warning System (EWS) for pluvial flood risk in urban areas.

The experimental facility represents a T-intersection street of 100 m^2 linked to a sewer system, and it is equipped with a rainfall simulator able to generate spatially homogeneous rainfall intensities. The dataset includes the results of experiments on roofs, street surfaces, inlets, manholes and the outfall of the drainage system as well as all products obtained during the tests.

The dataset is structured in the following items:

	01_Physical_model_description Full description of the urban drainage installation.	PDF
	02_Geometries Geometry of streets, roofs, and drainage network ready for import into numerical models.	SHP
	03_Rain_intensity_maps Rainfall maps of the intensities generated with the rainfall simulator in the experiments.	ASC
	04_Digital_Elevation_Models Digital Terrain Models of the street surface and roofs.	ASC
	05_Experimental_procedure Full description of the experimental procedure, equipment, measuring points, results, and structure of the database.	PDF
	06_Hydraulic_tests_database Database with post-processed experimental results ready for use. Results of flow rates of the 4 roofs, the 4 inlets, the 4 manholes, the grate and the outfall and the depths of the 9 surface points are presented. A file with additional data on the measuring points is also included.	DB
	07_Supplementary_material QGIS project with the products obtained	QGZ
	08_Multimedia Photos and videos of the platform and experiments	JPG MP4

The roofs results have been used in Sañudo et al. (2022) to assess three different numerical implementations to model rainfall-runoff transformation on roofs [DOI: https://doi.org/10.1002/hyp.14588]

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