1. PRESSURE DISTRIBUTIONS ON THE ONERA-M6-WING AT TRANSONIC MACH NUMBERS

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1.1 - INTRODUCTION -

In 1972, the ONERA Aerodynamics Department designed a swept back wing very well instrumented to be used as an experimental support for basic studies of three-dimensional flows at high Reynolds numbers from low to transonic speeds.

Wind tunnel data from this model called M6-wing have been constituting a good base both for computer program assessment and for understanding various flow phenomena like shock wave-boundary layer interaction or flow separation.

The selected data set was obtained in the ONERA S2MA wind tunnel at Mach numbers of 0.7, 0.84, 0.88 and 0.92 for angles of attack up to 6 degrees and a Reynolds number of about 12 million .

- DATA SET -

General description

1.1	Model designation or name	ONERA Wing M6
1.2	Model type (e.g., full span wing-body, semi-span wing)	semi-span wing (see also figures B1-1 and B1-2)
1.3	Design requirements/conditions	this model was designed to be used for studies of three-dimensional flows from low to transonic speeds at high Reynolds numbers.
1.4	Additional remarks	it is derived from the ONERA calibration model series M and represents the external third of the wing.

2. Model geometry

2.1 Wing data

	Wing planform	swept back (see figure B1-1)
	Aspect ratio	3.8
2.1.3	Leading-edge sweep	30°
	Trailing-edge sweep	15.8°
2.1.5	Taper ratio	0.562
2.1.6	Twist	without twist
	Mean aerodynamic chord	c = 0.64607 m
2.1.8	Span or semispan	b = 1.1963 m
2.1.9	Number of airfoil sections used to define wing	
2.1.10	Spanwise location of reference section and section coordinates (note if ordinates are design or actual measured values)	$y/b = 0$ section coordinates of the symmetrical profile (design values) : see table B1-1. The section is ONERA D normal to the generator at 40.18 % chord
2.1.11	Lofting procedure between reference sections	conical generation
2.1.12	Form of wing-body fillet, strakes	no body, no strake, no fillets