



**Inviscid supersonic flow past cones at
zero incidence:
(iii) Flow deflection in the conical flow field**

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THE PREPARATION OF THIS DATA ITEM

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INVISCID SUPERSONIC FLOW PAST CONES AT ZERO INCIDENCE:
(III) FLOW DEFLECTION IN THE CONICAL FLOW FIELD

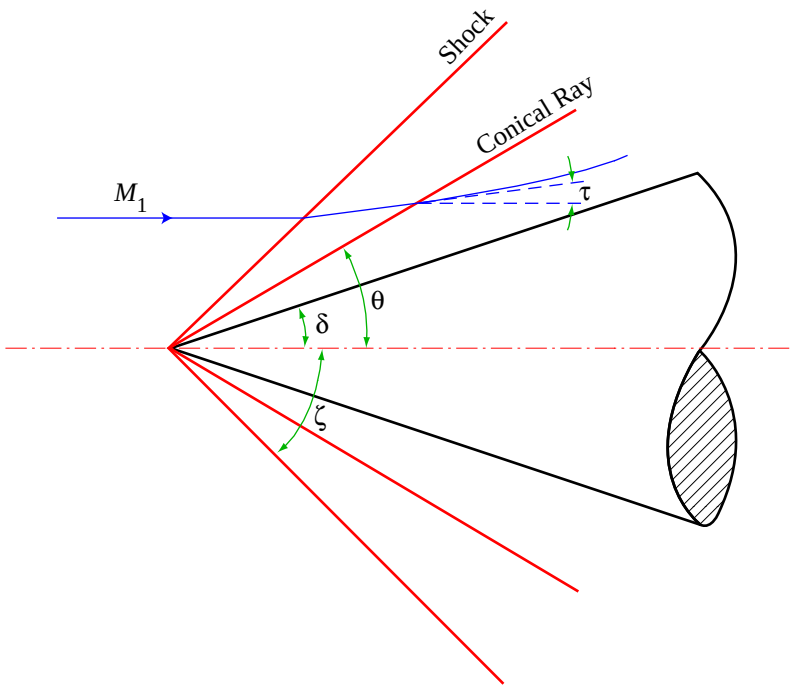
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INVISCID SUPERSONIC FLOW PAST CONES AT ZERO INCIDENCE:
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1. NOTATION AND UNITS

		SI	British
M_c	Mach number at surface of cone		
M_1	Mach number in uniform flow upstream		
γ	ratio of specific heat capacity at constant pressure to specific heat capacity at constant volume, taken as 1.4 for air		
δ	semi-vertex angle	deg	deg
ζ	shock angle	deg	deg
θ	conical ray angle	deg	deg
τ	flow deflection angle	deg	deg



2. NOTES

Figures 1a to 1h present data for the flow deflection, τ , of a streamline in the conical flow field between the shock and the surface of a sharp-nosed right-circular cone at zero incidence in a uniform supersonic flow of air considered as a perfect gas ($\gamma = 1.4$). The flow is assumed to be inviscid throughout. The variation of τ with θ in the range $\delta \leq \theta \leq \zeta$ is given for Mach numbers, M_1 , increasing from the shock