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Sommario/riassunto	Combining geometrical and microlocal tools, this monograph gives detailed proofs of many well/ill-posed results related to the Cauchy problem for di erential operators with non-e ectively hyperbolic double characteristics. Previously scattered over numerous di erent publications, the results are presented from the viewpoint that the Hamilton map and the geometry of bicharacteristics completely characterizes the well/ill-posedness of the Cauchy problem. A doubly characteristic point of a di erential operator P of order m (i.e. one where Pm = dPm = 0) is e ectively hyperbolic if the Hamilton map FPm has real non-zero eigenvalues. When the characteristics are at most double and every double characteristic is e ectively hyperbolic, the Cauchy problem for P can be solved for arbitrary lower order terms. If there is a non-e ectively hyperbolic characteristic, solvability requires the

subprincipal symbol of P to lie between Pæj and P æj , where iæj are the positive imaginary eigenvalues of FPm . Moreover, if 0 is an eigenvalue of FPm with corresponding 4 4 Jordan block, the spectral structure of FPm is insucient to determine whether the Cauchy problem is well-posed and the behavior of bicharacteristics near the doubly characteristic manifold plays a crucial role