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Sampling Time Effects on Crosswind Spread; Comparing the Random Force Model to CONDORS Data; Comparing the Random Force Model with y ~ ts0.2; 4. Concentration Fluctuation Modeling; Overview; Types of Concentration Fluctuation Models; Conditional Statistics for Fluctuation Calculations; Wind Tunnel Simulation versus Field Testing for Model Validation; 5. Probability Distributions; Exponential Probability Distribution; Clipped-Normal Probability Distribution; Log-Normal Probability Distribution; Gamma Probability Distribution Recommended Probability Distribution and Conditional Intensity Functions6. Release Height and Source Size Effects on Fluctuation Intensity; Internal Fluctuations in Jets and Plumes with No Meandering; Fluctuation Intensity in Meandering Plumes from Ground Level Releases; Meandering Plume Models for Source Size Effects on Elevated Releases; Comparison with Chatwin and Sullivan's Similarity Model; Release Momentum Effects on Source Size; Fluctuations Near the Ground: Dissipation by Wind Shear; Terrain Roughness, Atmospheric Stability, and Compatibility with Existing Hazard Assessment Models 7. Source Density Effects on FluctuationsDense Plumes; Buoyant Plumes; 8. Buildings and Obstacles; Modeling Concentration Fluctuations in Building Wakes; 9. Threshold Crossing and Peak Levels; Time Sequence versus Ensemble Repeat Averages; 10. Framework for an Operational Model; Adjusting Mean Concentration for Averaging Time; Concentration Fluctuation Statistics; Concentration Fluctuation Intensity; Fraction of Time Threshold Concentration Is Exceeded; Once-per-Event Peak Concentration; Summary
Appendix A Averaging and Sampling Time Effects on Plume Spread Velocity and Concentration FluctuationsInertialess Fluctuation Spectrum; Concentration Fluctuations; Power Law Exponent qc for Averaging Time; Effect of Averaging Time on Concentration Variance; Effect of Sampling Time on Concentration Variance; Power Law Exponent pc for Increased Sampling Time; Velocity Fluctuations; Sampling Time Effects on Crosswind Velocity Variance; Sampling Time Effects for the Transverse Isotropic Spectrum; Averaging Time Effects for Finite Sampling Time; Gifford's Random Force Model for y Wilson's Power Law Approximation to Gifford's Random Force Model

Sommario/riassunto

This book contributes to more reliable and realistic predictions by focusing on sampling times from a few seconds to a few hours. Its objectives include developing clear definitions of statistical terms, such as plume sampling time, concentration averaging time, receptor exposure time, and other terms often confused with each other or incorrectly specified in hazard assessments; identifying and quantifying situations for which there is no adequate knowledge to predict concentration fluctuations in the near-field, close to sources, and far downwind where dispersion is dominated by atmospheric t

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Nota di contenuto	1 Preoperative Evaluation and Management from the Neurosurgical Perspective Raymond Walkup and Jeffrey J. Olson; INTRODUCTION Taking a history and doing a general physical and neurologic evaluation should be part of every skull base surgeon's training. This said, it is still reasonable to review the salient points of this activity, which can serve as a point of a departure toward obtaining information directed at a given individual's specific malady. By obtaining this information, one can best 2 Anterior Skull Base Preoperative Evaluation from the Otolaryngologic Perspective J. Nicolas McLean and Charles E. Moore; INTRODUCTION Anatomically, the skull base can be divided into the anterior, middle, and posterior fossae. The lesser and greater wings of the sphenoid bone divide the anterior fossa from the middle fossa, and the petrous pyramid and mastoid portions of the temporal bone divide the middle and posterior fossae. The parietal and occipital lobes of the brain do not directly con 3 Craniofacial Approach to Skull Base Lesions Jeremy N. Ciporen, Jeffrey J. Olson, and Charles E. Moore; INTRODUCTION The craniofacial approach depicted in this chapter is utilized mainly to resect neoplasms that invade the dura and/or extend intracranially from the sinuses or orbits. Less frequently, the converse situation exists in terms of site of

origin and direction of invasion however, the principles of the approach remain the same. The following stepwise description will enable the surg

4 Petrosal Craniotomy Tomoko Tanaka, Douglas E. Mattox, and Jeffrey J. Olson; GENERAL INDICATIONS FOR PETROSAL CRANIOTOMY Petrosal craniotomy is designed for reaching lesions in and around the petrous bone by shortest distance while preserving as many normal structures as possible. It is broadly applicable and modifiable for disease involving the lateral and posterior skull base. Structures relevant to this surgical approach include the bony, neurologic, and vascular contents of the middle

5 Endoscopic Endonasal Skull Base Surgery Vladimir Dadashev, David V. LaBorde, and Costas G. Hadjipanayis INTRODUCTION One of the major challenges in transphenoidal surgery has been the adequate visualization of anatomical structures. During the past decade, endoscopic endonasal transphenoidal surgery has been progressively accepted by surgeons and patients as a minimally invasive approach permitting panoramic vision close to the surgical target with minimal trauma. The endoscope is used as a

6 Endoscopic Tumor Resection and Cerebrospinal Fluid Leak Repair Jodi D. Zuckerman and John M. DelGaudio; INTRODUCTION With the advent of endoscopic techniques in the early 1980's, the surgical approach to the skull base has gone through a dramatic transformation. Sinonasal tumors that once could only be accessed through external approaches now are accessible through an endoscopic sinonasal approach. This chapter outlines the preoperative planning and endoscopic surgical techniques for tumor

Sommario/riassunto

Pathology involving the skull base and adjacent soft tissues present a challenge to all physicians dealing with the anatomy of this region. The goal of Skull Base Surgery: Basic Techniques is to provide the surgeon with a descriptive, step by step, pictorial analysis of skull base surgical techniques. Emphasis is placed on the most commonly used and applicable procedures that address the majority of the pathology encountered in standard practice. This beautifully illustrated text is directed to be the most useful for individuals new to these methods, surgical trainees and mid-level