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湖-气热传输模型及参数敏感性研究

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摘要: 在一维涡扩散模型的基础上, 发展了考虑冬天结冰和夏天蒸发等水体相变问题及对流混合过程的湖-气热传输模型. 模型采用焓代替温度作为预报变量, 这也更加方便处理水的相变问题. 模型的计算结果与以色列Kinneret湖的观测资料进行对比, 验证了模型的合理性, 说明了加入对流混合过程是符合湖-气热传输的实际物理机制的. 对风速和湖面摩擦速度作了敏感性实验, 证明他们对湖面温度和蒸发潜热有着重要的影响.

关键词: 湖-气热传输; 湖泊环境; 大气环境; 陆面过程

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