Nanotubes in Nanoelectronics: Transport, Growth and Modeling

Reviews

An extremely wonderful book with perfect and lucid information. This can be for all those who state there had not been a really worth reading through. It’s been written in an exceptionally easy way and it is only after I finished reading this ebook in which actually modified me, alter the way I really believe.

(Kaelyn Reichel)
BiblioGov. Paperback. Book Condition: New. This item is printed on demand. Paperback. 30 pages. Dimensions: 9.7in. x 7.4in. x 0.1in.
The effectiveness of techniques for creating bogus vortices in numerical simulations of hurricanes is examined by using the Penn State NCAR nonhydrostatic mesoscale model (MM5) and its adjoint system. A series of four-dimensional variational data assimilation (4-D VAR) experiments is conducted to generate an initial vortex for Hurricane Georges (1998) in the Atlantic Ocean by assimilating bogus sea-level pressure and surface wind information into the mesoscale numerical model. Several different strategies are tested for improving the vortex representation. The initial vortices produced by the 4-D VAR technique are able to reproduce many of the structural features of mature hurricanes. The vortices also result in significant improvements to the hurricane forecasts in terms of both intensity and track. In particular, with assimilation of only bogus sea-level pressure information, the response in the wind field is contained largely within the divergent component, with strong convergence leading to strong upward motion near the center. Although the intensity of the initial vortex seems to be well represented, a dramatic spin down of the storm occurs within the first 6 h of the forecast. With assimilation of bogus surface wind data only, an expected dominance of the rotational component of the wind field is generated, but the minimum pressure is adjusted inadequately compared to the actual hurricane minimum pressure. Only when both the bogus surface pressure and wind information are assimilated together does the model produce a vortex that represents the actual intensity of the hurricane and results in significant improvements to forecasts of both hurricane intensity and track. This item ships from La Vergne, TN. Paperback.

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