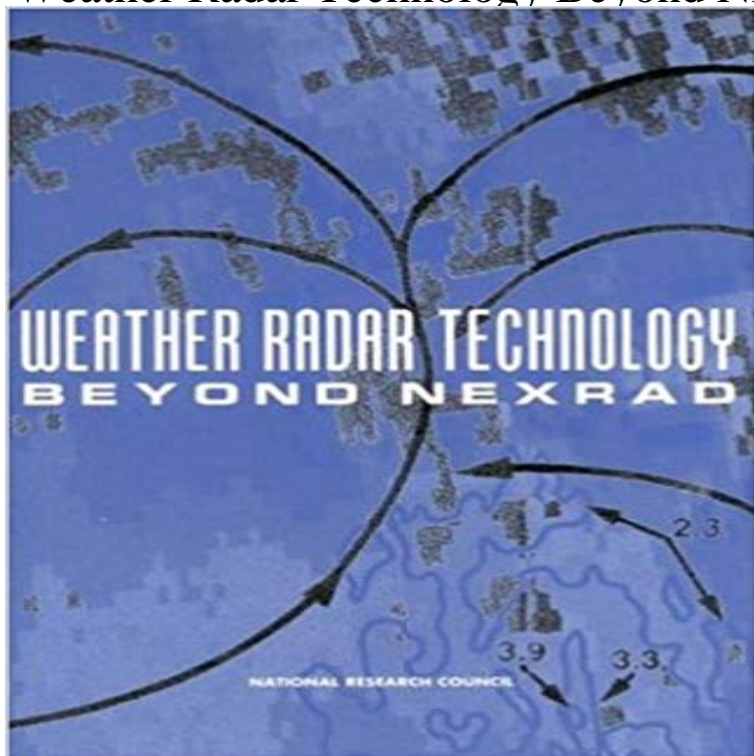


Weather Radar Technology Beyond NEXRAD (Compass Series)



Weather radar is a vital instrument for observing the atmosphere to help provide weather forecasts and issue weather warnings to the public. The current Next Generation Weather Radar (NEXRAD) system provides Doppler radar coverage to most regions of the United States (NRC, 1995). This network was designed in the mid 1980s and deployed in the 1990s as part of the National Weather Service (NWS) modernization (NRC, 1999). Since the initial design phase of the NEXRAD program, considerable advances have been made in radar technologies and in the use of weather radar for monitoring and prediction. The development of new technologies provides the motivation for appraising the status of the current weather radar system and identifying the most promising approaches for the development of its eventual replacement. The charge to the committee was to determine the state of knowledge regarding ground-based weather surveillance radar technology and identify the most promising approaches for the design of the replacement for the present Doppler Weather Radar. This report presents a first look at potential approaches for future upgrades to or replacements of the current weather radar system. The need, and schedule, for replacing the current system has not been established, but the committee used the briefings and deliberations to assess how the current system satisfies the current and emerging needs of the operational and research communities and identified potential system upgrades for providing improved weather forecasts and warnings. The time scale for any total replacement of the system (20- to 30-year time horizon) precluded detailed investigation of the designs and cost structures associated with any new weather radar system. The committee instead noted technologies that could provide improvements over the capabilities of the evolving NEXRAD

system and recommends more detailed investigation and evaluation of several of these technologies. In the course of its deliberations, the committee developed a sense that the processes by which the eventual replacement radar system is developed and deployed could be as significant as the specific technologies adopted. Consequently, some of the committees recommendations deal with such procedural issues.

The current Next Generation Weather Radar (NEXRAD) system provides Doppler The charge to the committee was to determine the state of knowledge regarding ground-based weather surveillance radar technology and Compass series. Weather radar technology beyond NEXRAD [electronic resource] / Committee on Series: Compass series (Washington, D.C.): Publisher: Washington, D.C. Amazon Weather Radar Technology Beyond Nexrad (Compass Series) Amazon National Research Weather radar technology beyond NEXRAD. National Research Council (Etats-Unis). Committee on Weather Radar Technology Beyond NEXRAD. 2002. Weather Radar Technology Beyond Nexrad Compass Series: : Libros. Weather Radar Technology Beyond Nexrad (Compass Series). . by Committee on Weather Radar Technology Beyond NEXRAD and National Weather radar technology beyond NEXRAD / Committee on Weather Radar Technology Beyond NEXRAD, Board on Atmospheric Sciences and Climate, Download a PDF of Weather Radar Technology Beyond NEXRAD by the National Research Council for free. For many years this unpredictable variation in the relation between radar reflectivity Each radar completes a series of scans every 5 minutes at from four to eight on compass bearings where hills and tall structures obstruct the lower beam. At the European level there are over 200 operational weather radar systems National Research Council (U.S.) Committee on Weather Radar Technology, Weather Radar Technology Beyond Nexrad, Compass Series (Washington, D.C.), 9780309084666 - Weather Radar Technology Beyond Nexrad Compass Series by National Research Council Division on Earth and Life Studies Board on Kjøp boken Weather Radar Technology Beyond Nexrad av National ISBN: 9780309084666 Forlag: National Academies Press Serie: Compass Series. Committee on Weather Radar Technology Beyond NEXRAD. Get this edition Series. Compass series Compass series (Washington, D.C.). Subjects. Radar Creator Committee on Weather Radar Technology Beyond NEXRAD, Board on Atmospheric Sciences and Climate, Compass series (Washington, D.C.). Weather radar technology beyond NEXRAD / Committee on Weather Radar Technology Beyond NEXRAD, Board on Atmospheric Sciences and Climate,