

论文

辽宁省太阳能资源分布及区划初探

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摘要 根据1971—2006年沈阳、大连和朝阳太阳辐射观测站历年逐月太阳总辐射和日照百分率实测资料,应用统计方法计算辽宁无辐射观测地区的太阳总辐射量,进而了解辽宁省太阳能资源分布情况。结果表明:辽西和沿海地区及长山群岛太阳能资源较好,辽北次之,东部山区较差;春夏季较好,秋冬季较差,5月最好,12月最差。太阳能资源历年变化相对平稳,各年代呈小幅度波动,其中20世纪80年代偏小、90年代偏大,近几年回落。根据各地太阳总辐射年总量,将太阳能资源定为4级评估指标,并将辽宁省太阳能资源划分为丰富、较丰富、一般和贫乏4个区域。

关键词 [太阳能资源](#) [太阳总辐射](#) [分布](#) [区划](#)

分类号

Solar energy resource distribution and regional division in Liaoning province

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Abstract Based on the monthly solar radiation data in Shenyang station, Dalian station and Chaoyang station and sunshine percentage data from 1971 to 2006, as well as statistical method for data interpolation, the solar energy resource distribution was analyzed in Liaoning province. The results indicate the solar energy resources are rich in the west of Liaoning province and coastal areas as well as Changshan islands, followed in the northern of Liaoning province, and poor in the east mountain areas of Liaoning province. The solar energy resources are rich in spring and summer, especially in May, and poor in autumn and winter, especially in December. The inter-annual changes of solar energy resources are relatively stable and inter-decadal changes fluctuate lightly. The fluctuation is smaller in the 1980s and larger in the 1990s. And it becomes smaller during recent years. According to annual total solar radiation in different regions, it is suggested that the assessment indices of solar energy resources could be divided into 4 levels. The solar energy resources in Liaoning province could be divided into rich region, richer region, average region and poor region.

Key words [Solar energy resources](#) [Total solar radiation](#) [Distribution](#) [Regional division](#)

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