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A COMPARISON AND ANALYSIS OF LAND SURFACE TEMPERATURES FROM REMOTE SENSING AND OBSERVATION STATIONS

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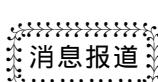
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Abstract : By comparing monthly maximum Land Surface Temperature (LST) of January 1999 retrieved from NOAA—AVHRR data with the result from ground observation, it is found that there is a correlation coefficient of 0.86 with a standard deviation of 5.6°C between the monthly maximum LSTs from remote sensing and those from ground observation. Monthly maximum LSTs retrieved from remote sensing are generally 2.8°C lower than those from ground observation. It is necessary to revise LSTs retrieved from remote sensing to reduce the mean deviation between them and LSTs from ground observation without any delay. After the revision of the monthly maximum LSTs retrieved from remote sensing, the correlation coefficient between the modified monthly maximum LSTs retrieved from remote sensing and LSTs from ground observation remains 0.86, the standard deviation is reduced from 5.6°C to 5.2°C, and the mean deviation decreases from 4.9°C to 4.1°C. Although the modified monthly maximum LSTs retrieved from remote sensing remain lower than those from ground observation, the mean deviation is reduced from 2.8°C to 0.1°C.

Key words : NOAA—AVHRR; Land surface temperature; Ground observation; Comparison; Analysis

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2002 年《国土资源遥感》影响因子及分类排序

据最新出版的《2003 年版中国科技期刊引证报告》,2002 年《国土资源遥感》的影响因子为 0.438,在“测绘学类”中位居第 4 位(表 1),在 1534 种中国科技论文统计源期刊中位居第 309 位。

表 1 期刊影响因子分类排序(测绘学类)^①

名 次	期 刊 名 称	总被引频次	影 响 因 子
1	测绘学报	376	0.951
2	遥感学报	271	0.719
3	大地测量与地球动力学	172	0.450
4	国土资源遥感	121	0.438
5	大地构造与成矿学	138	0.371
6	测绘科学	56	0.321
7	遥感技术与应用	118	0.316
8	测绘工程	58	0.291
9	测绘通报	280	0.280

^① 据《2003 年版中国科技期刊引证报告》