Although the spatial resolution of SPOT imagery is clearly insufficient to detect individual vehicles, it might be able to detect changes in orderly rows of vehicles. At the same time, other possible explanations for the changes are apparent in the imagery. For example, it could be tents or packing crates that have been moved. Although it is fairly certain that something has been moved, the spatial resolution of the imagery is clearly much too limited to make a reliable assessment of what this is.

## Discussion

The change detection enhancement was quite effective in finding areas of change between the two images. The potential for detecting construction starts was clearly shown in the area north of the airport. The shifting positions of aircraft and helicopters at the airport were plainly visible, suggesting that activity levels could be estimated to some degree using multitemporal coverage with civilian satellite imagery. Changes in rows of parked vehicles were also evident. Based upon the large changes seen in the storage area north of the NE Camp, it seems that any large-scale departure of equipment from such storage areas would be detectable using change detection techniques.

It is clear, however, that the imagery is not really suitable for monitoring military ground forces if anything more than very superficial information is required. Although it was possible to locate many of the military facilities in Kabul, more detailed interpretation concerning the actual military forces stationed there was unreliable. The interpretation depended heavily upon indirect cues such as the locations of features rather than more reliable ones such as their shape. Ground forces at undeclared locations would be difficult to detect, particularly if any efforts were made to conceal their presence.

Another limitation of commercial imagery for monitoring of military forces is its timeliness. Space Media Network, a company that specializes in providing commercial satellite imagery to the media, has made special arrangements to get SPOT imagery within a few days for fast-breaking stories.[17] However, this kind of delivery cannot be routinely provided and is very expensive. The delivery time for commercial imagery is usually several weeks or more, even for imagery that has already been acquired and archived. The length of time necessary to acquire, receive and then analyze the imagery means that considerable time will pass from the time an order is placed to the time the analysis results are available.

Objects must be fairly large to be evident in commercial satellite imagery. Either they must be permanent features or any changes of significance must occur over periods of weeks or more. These considerations severely restrict the potential usefulness of such imagery for verification of withdrawals of armed forces. However, there are other potential applications for commercial satellite imagery, such as the one to be outlined in the following section.