

KFA-1000 photography is available in panchromatic mode or colour mode. The colour film is spectrozonal, with two individual emulsion layers. The colour of the final photographic product depends upon the selection of filters used during film processing. Original scales are approximately 1:250 000 on 30 cm × 30 cm film, covering an area of about 50 km × 50 km. Photographic scales as large as 1:25 000 can be produced.

The MK-4 is the most advanced Soviet large format mapping camera. It is a multispectral camera recording four black and white images that may later be combined to produce a colour image. The imagery is recorded at an original scale of approximately 1:700 000 on 19 cm × 19 cm film. Scales as large as 1:25 000 can be produced.

## **Airborne Systems**

Commercially available airborne remote sensing systems could be valuable for arms control and peacekeeping applications. A variety of sensors and platforms might be appropriate.

### **Aerial sensor systems**

The major categories of sensors include photographic cameras, thermal infrared systems and imaging radars. Table 4 outlines some of the main features of each sensor type.

Traditional photography using a standard aerial camera is an economical and reliable option. Photographic systems can provide very fine spatial detail. Aerial cameras and film are inexpensive compared with many of the other systems. Photographic prints can be easily made for use in the field.

Photographic systems, however, have a number of disadvantages. They cannot provide real-time data. Exposed films must be processed before they can be interpreted. The need for darkroom facilities to develop film can be inconvenient in remote or isolated regions. Photographic systems are primarily suited to daytime use, ideally in the brightest part of the day from 10:00 a.m. to 2:00 p.m. local time.<sup>8</sup> Finally, cloud cover can pose serious problems by forcing delays in overflights or degrading the information value of photographs.<sup>9</sup>

Several types of commercially available aerial cameras could be used, including metric survey cameras, medium-format reconnaissance cameras and hand-held aerial cameras. Metric survey cameras can take large-scale photographs with very fine detail, negligible distortion and homogeneous image quality over the full photo frame. Many missions will not require this type of accuracy.