The HRV instrument operates as a pushbroom scanner. Entire lines of imagery are collected at once using 6,000 charge-coupled device (CCD) detectors arranged in linear arrays. The motion of the satellite provides the second dimension for the image. Use of a pushbroom scanner eliminates geometric distortions caused by acceleration and deceleration of the oscillating mirror used in mechanical scanners.

The HRV sensors have the capability to operate over a range of look angles out to 27° from vertical. A strip selection mirror for each sensor can be instructed from the ground to observe areas of interest which are not directly beneath the satellite, providing a 950 km wide observable corridor centred on the satellite's ground track. The width of the imaged area on the ground will vary from 60 km if the area was directly beneath the satellite to 81 km if the image was acquired obliquely. Lengths of the imaged scenes remain constant at about 60 km.

If the satellite were only capable of vertical viewing, it would be possible to image a particular location only once during the 26-day orbital cycle of the satellite. Oblique viewing provides the means to collect images more frequently for a particular site.

Soyuzcarta

Recently, the Soviet Soyuzcarta satellite program has made data available for public use. Data is available for all areas of the world with the exception of the USSR, Eastern Europe, China, Vietnam, North Korea, Afghanistan, Mongolia and Cuba. However, special acquisition in these areas will be considered, if requested. Two types of photographic imagery are available, the KFA-1000 imagery and the MK-4 photographic data, both having