

photography can be viewed with a stereoscope in the same way as normal vertical photographs.

### *Aerial films*

Commercially-available aerial photographic film would be suitable for Open Skies missions. Specialized reconnaissance films are able to record finer spatial detail than their commercial counterparts. This is required for high-altitude reconnaissance but should not be necessary for Open Skies.

There are four main types of film which are used commercially for aerial photography. The "standard" aerial survey film is panchromatic film. This is a black and white film which has been manufactured to have a sensitivity similar to that of the human eye. High speed infrared film is also a black and white film, but it is sensitive to near-infrared wavelengths of light. It is useful for taking photographs when there is a lot of atmospheric haze. Colour film is available which is sensitive to blue, green and red light and produces photographs showing features in about the same colours that the human eye would see. Colour infrared or "camouflage detection" film is sensitive to green, red and near-infrared wavelengths of light. Using this film, vegetation appears red and bare ground appears cyan. The film was originally developed to assist in the recognition of camouflaged equipment. Vehicles which have been camouflaged to visually appear like vegetation will not appear red on the film unless the camouflage material has been manufactured to simulate the high near-infrared reflectance of vegetation (Figure 11).

## **2.2 Thermal infrared systems**

Thermal infrared systems use electronic detectors to sense thermal infrared radiation or "heat radiation." Thermal systems can sense thermal radiation which is emitted by all surfaces at all times, rather than depending upon sunlight as