CLAIMS

1. A passive IR imaging system that comprises, on its optical axis:

   - a matrix-array detector placed in a cryostat comprising a cold diaphragm,

   - an optical device for forming images on the detector, having a focal length that is continuously variable between a large-field (GC) configuration of focal length F_{GC} and a small-field (PC) configuration of focal length F_{PC}, with, in this range of focal lengths, a constant numerical aperture and an aperture diaphragm located level with the cold diaphragm of the cryostat, comprising:

      - a head group of fixed position and constant focal length that comprises at least one lens mounted in a mechanical holding means, of diameter determined by the small-field (PC) configuration,
      - a first group and second group that are movable and able to be positioned in order to ensure the change of focal length between F_{GC} and F_{PC} and the focus of the image on the detector,
      - an image-transport group of fixed position and of constant magnification, able to image the aperture diaphragm in order to limit the diameter of the envelope of the small-field useful beams on the lenses of the head group,

   wherein the optical device comprises a very-small-field (TPC) configuration of preset focal length F_{TPC}, with the first and second movable groups positioned to obtain the focal length F_{TPC}, and an aperture diagram for the very-small-field (TPC) configuration embodied in the mechanical holding means of the head group such that the image in the detector space of this aperture diaphragm is located in the vicinity of the cold diaphragm of the cryostat.

2. The passive IR imaging system as claimed in claim 1, wherein the two movable groups are adjacent and in that the first movable group is divergent with a negative variable magnification, and the second movable group is convergent with a negative variable magnification.

3. The passive IR imaging system as claimed in claim 2, wherein the large-field (GC) configuration corresponds to 20°, the small-field (PC) configuration to 3°, and the very-small-field (TPC) configuration to 2°, and in that the product of the magnifications of the first and second movable groups is higher than 1.2 in very-small-field (TPC) configuration, comprised between 0.8 and 0.85 in small-field (PC) configuration and higher than 0.12 in large-field (GC) configuration.

4. The passive IR imaging system as claimed in claim 1, wherein it comprises a convergent fixed group with a negative variable magnification, located between the two movable groups which are divergent and have a negative variable magnification.

5. The passive IR imaging system as claimed in claim 4, wherein the large-field (GC) configuration corresponds to 20°, the small-field (PC) configuration to 3°, and the very-small-field (TPC) configuration to 2°, and in that the absolute value of the magnification of the image-transport group is lower than 0.1.

6. A cooled IR camera that comprises a passive IR imaging system as claimed in one of the preceding claims.

7. A pair of cooled IR binoculars that comprises a passive IR imaging system as claimed in one of claims 1 to 5.