[0056] FIG. 4 depicts passive thermal system **400** comprising a solid radiator panel, such as panels **104**, **106**, **108**, and **112** and structural heat pipes **470**. Each structural heat pipe **470** includes a straight vertical fin **480** that extends away from the solid radiator panel and from a position proximal to top **478** of main body **374** of structural heat pipe **470**. The straight fin **480** aligns substantially with a midpoint between a left side and a right side of the main body of the structural heat pipe. As used herein, the phrase "top of the main body of the structural heat pipe" means the location on the portion of the heat pipe that contains bore **372** that is furthest from the radiator panel. So, for example, if the FIG. 4 were inverted such that heat pipes **470** were facing "downward," the "top of the main body of the structural heat pipe" is the same location on heat pipes **470** as in FIG. 4.

[0057] Such a fin is not present on a conventional heat pipe. The vertical fin increases the out-of-plane height of heat pipe **470** relative to the unmodified heat pipe **370**. This increase in out-of-plane height increases the "area moment-of-inertia" of the heat pipes **470** and the heat pipe/panel assembly (*i.e.*, passive thermal system **400**). The increase in area moment of inertia equates to an increase in stiffness.

[0058] In the embodiment depicted in FIG. 4, fin **480** is orthogonal to the radiator panel. In some other embodiments, fin **480** is not orthogonal to the radiator panel. The latter case might be dictated, for example, in a situation in which there insufficient clearance for an orthogonally oriented fin.

[0059] In some further embodiments, a passive thermal system in accordance with the present teachings has two straight vertical fins (each like fin **480**) that extend away from the solid radiator panel and from a position proximal to top **478** of main body **374** of structural heat pipe **470**. In preferred embodiments, both fins are orthogonal to the radiator panel. However, if space or other constraints dictate otherwise, the fins can be oriented non-orthogonal to the radiator panel.

[0060] FIG. 5 depicts passive thermal system **500** comprising a solid radiator panel, such as panels **104**, **106**, **108**, and **112** and structural heat pipes **570**. Each structural heat pipe **570** includes L-shaped fin **580** having a first portion extending away from the solid radiator panel, said first portion aligned substantially with a midpoint between a left side and right side of the main body of the structural heat pipe. The L-shaped fin increases the out-of-plane height of heat pipe **570** relative to the unmodified heat pipe **370**, which, as previously noted, increases the area

moment of inertia of the heat pipes **570** and the heat pipe/panel assembly (*i.e.*, passive thermal system **500**). The L-shaped fin requires less out-of-plane clearance than a fin that is straight and has the same amount of mass and the same fin thickness. The L-shaped fin also provides more lateral stability to heat pipes **570**, which might be required in some embodiments.

[0061] FIG. 6 depicts passive thermal system **600** comprising a solid radiator panel, such as panels **104**, **106**, **108**, and **112** and structural heat pipes **670**. Each structural heat pipe **670** includes double fin **680**. The double fin increases the out-of-plane height of heat pipes **670** relative to the unmodified heat pipe **370**, and, hence, increases the area moment of inertia of the heat pipes **670** and the heat pipe/panel assembly (*i.e.*, passive thermal system **600**). Like L-shaped fin **580**, double fin **680** also improves the lateral stability of structural heat pipe **670**, but is typically preferred to L-shaped fin **580** due to the lack of symmetry of the L-shaped fin.

[0062] FIG. 7 depicts passive thermal system **700** comprising a solid radiator panel, such as panels **104**, **106**, **108**, and **112** and structural heat pipes **770**. Each structural heat pipe **770** includes a horizontal plate **780**, providing a classic "I-beam" configuration. Although structural heat pipe **770** does not possess the out-of-plane height of, for example, structural heat pipe **470**, the I-beam configuration does improve stiffness relative to a conventional heat pipe having the same size.

[0063] FIG. 8 depicts passive thermal system **800** comprising a solid radiator panel, such as panels **104**, **106**, **108**, and **112** and structural heat pipes **870**. Each structural heat pipe **870** includes vertical fin **880** and horizontal plate **882**, providing a "tall" I-beam configuration. The vertical fin **880** extending away from the solid radiator panel and is aligned substantially with a midpoint between a left side and right side of the main body of the structural heat pipe. The additional out-of-plane height of structural heat pipe **870** makes it stiffer than structural heat pipe **770** and, of course, stiffer than unmodified heat pipe **370**.

[0064] In structural heat pipes **470**, **570**, **670**, **770** and **870**, the main body of the heat pipe is structurally modified. In some other embodiments, rather than altering the main body of the heat pipe, a height-increasing feature is coupled to the main body, such as with appropriate fasteners or adhesive.