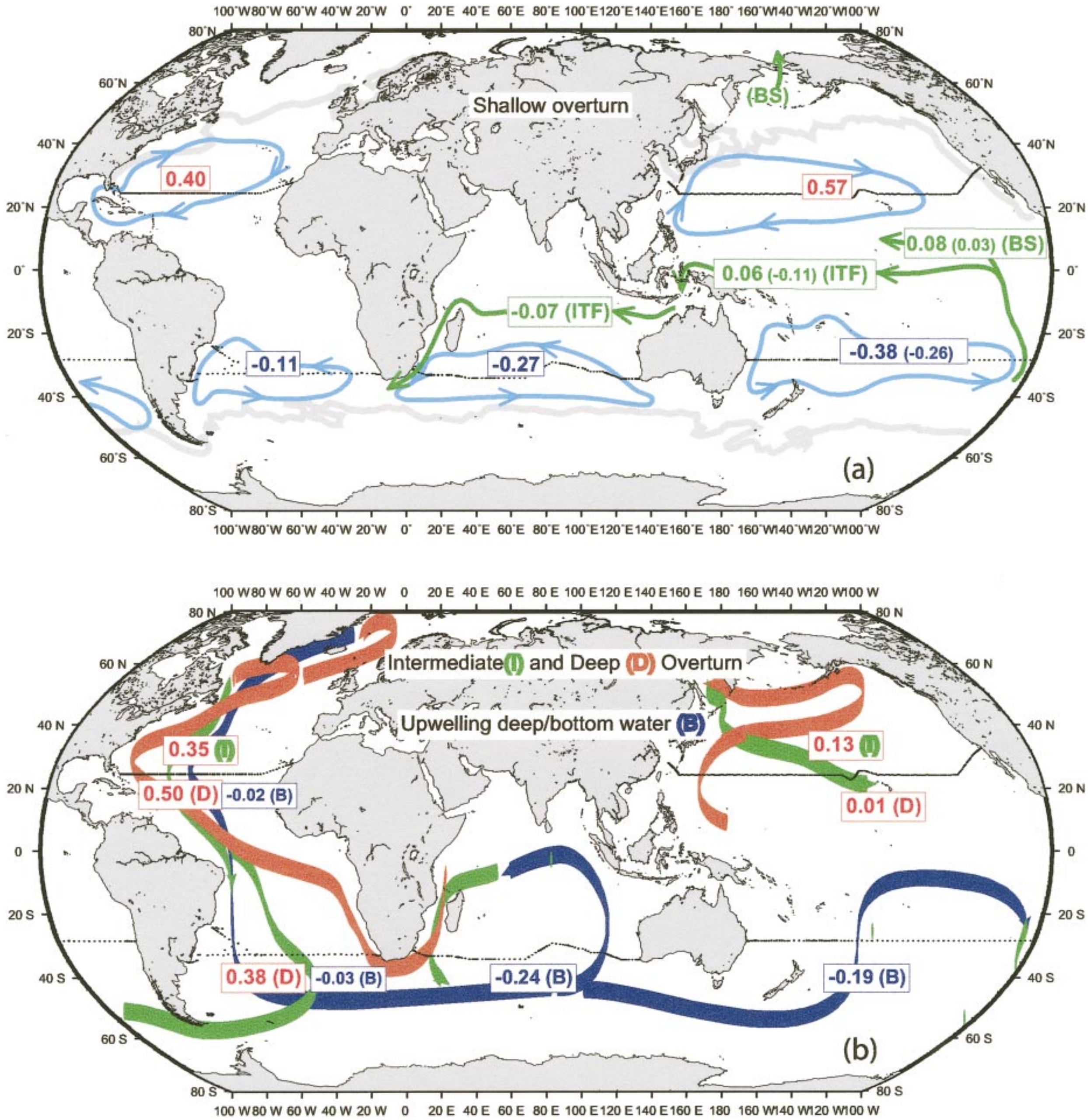

FIG. 5. (a) Shallow overturning heat transports (PW) for each anticyclonic subtropical gyre and those associated with the ITF (asterisked values in Table 5). Red indicates northward; blue indicates southward. Green numbers are heat transports associated with the ITF, including both flow through the passages and across the basin zonal section, hence for balanced mass. In the South Pacific, two gyre and ITF values are given: the first is based on ITF inflow across 28°S entirely within the shallow layer while the second, in parentheses, is based on ITF inflow split between the shallow layer and the 27.1–27.6 σ_θ layer (see text and Table 11). Schematic streamlines for the gyres are based on adjusted geostrophic streamfunctions in Reid (1994, 1997) for the Atlantic and Pacific (from Talley 1999). The underlying light gray contours are the zeros of wind stress curl used to determine the location of maximum winter surface density in each basin. (b) Intermediate (I), deep (D), and bottom (B) water overturning heat transports, based on calculations shown in Fig. 6 and listed in Tables 7–11. Red numbers: northward (>0) transport. Blue numbers: southward (<0) transport. The underlying cartoon of pathways illustrates crudely the direction of large layers involved in the overturning; red: upper ocean; green: intermediate waters; blue: deep and bottom waters.

the 6.7 Sv of AABW upwells into the overlying NADW layer assuming the minimum density change. (This AABW volume transport is larger than the AABW transports on the other Atlantic sections, not shown except for 30°S, where the transport appears to be too low. Lack of continuity in bottom water transports is a problem in the RAtl and RPac analyses, arising from accommodating the large variation in near-bottom sam-