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What drives the total solar irradiance (TSI) changes during a deep solar minimum, i.e., during practical absence of detectable sunspot groups and long-lasting active regions? The abundant data sets comprising X-ray, UV and visible measurements show that in June-October 2008 the pronounced (at ~10-sigma level) TSI variability detaches from the patterns seen in EUV. TSI, however, follows the changes in the relative surface area coverage by strong magnetic fields, as well as the variations of the MgII index. The reviewed data are yet to reveal the nature of the elusive TSI driver. Download to PDF