Access to accurate geodetic coordinates is a key requirement for precise orbit determination (POD). This is specifically important for altimeter missions and could affect derived mean sea level, which has important scientific significance related to global climate change issues. While ITRF2008 is the optimum global frame during the observation periods of each geodetic techniques used in the ITRF2008 combination, it cannot be used directly for precise orbit determination of altimeter missions because it does not necessarily include all current geodetic stations (due to insufficient data or changes since the solution was determined) nor recently collected data from existing stations. This solution also does not use any geophysical constraints on velocities, leading to weak estimates in cases where the available time series is too short. Consequently, some coordinates may degrade with time, which could be problematic for users. For DORIS, we are deriving a global reference frame called DPOD2008, which fulfills all requirements for POD applications within the next few years. We summarize here the different steps that were required to first check the quality of the ITRF2008 when propagated to 2015, and then to build new positions and velocities for all DORIS stations using original ITRF2008 values as often as possible. We will present satellite orbit tests comparing DPOD2008 with other frames, for past or recent data. Results will be presented for several types of POD tests: orbit overlaps and orbit centering. Plans to regularly update the DPOD2008 when new DORIS station arise will also be discussed.