	GDR–C	GDR–D
Gravity model	EIGEN-GL04S-ANNUAL (2008) Non-tidal TVG : drifts in degree 2,3,4 zonal coeffs, C21/S21; Annual and semi-annual terms up to deg/ord 50 Solid Earth Tides: from IERS2003 conventions Ocean tides FES2004 Atmospheric gravity : 6hr NCEP pressure fields + tides from Horwitz-Cowley model Pole Tide: solid Earth and ocean from IERS2003 conventions Third bodies: Sun, Moon, Venus, Mars and Jupiter	**EIGEN-GRGS_RL02bis_MEAN-FIELD (2011)** Non-tidal TVG : Annual, Semi-annual, and **drifts up to deg/ord 50** Solid Earth Tides: from IERS2003 conventions Ocean tides FES2004 Atmospheric gravity : 6hr NCEP pressure fields + **tides from Biancale-Bode model** Pole Tide: solid Earth and ocean from IERS2010 conventions Third bodies: Sun, Moon, Venus, Mars and Jupiter
Surface forces	Radiation Pressure model: thermo-optical coefficient from pre-launch box and wing model, with smoothed Earth shadow model Earth Radiation : Knocke-Ries albedo and IR satellite model Atmospheric density model : DTM-94 for Jason, and MSIS-86 for Envisat	Unchanged
Estimated dynamical parameters	Drag coefficient every 2 or 3 revolutions Along-track and Cross-track 1/rev per day or every 12 hours	Unchanged
Satellite reference	Mass and Center of gravity: Post-Launch values + variations generated by Control Center Attitude Model : For Jason-1 and Jason-2 : Quaternions and Solar Panel orientation from control center, completed by nominal yaw steering law when necessary For Envisat: nominal attitude law	Unchanged
Displacement of reference points	Earth tides: IERS2003 conventions Ocean Loading: FES2004 Pole tide : solid earth pole tides (Pole tide and ocean loading applied to both SLR stations and DORIS beacons) Reference GPS constellation: JPL solution at IGS (orbits and clocks) , consistent with IGS05; before GPS week 1400, JPL solution has been aligned with IGS05; IGS00 clocks are unchanged	Earth tides: IERS2003 conventions Ocean Loading: FES2004 Pole tide : solid earth pole tides (Pole tide and ocean loading applied to both SLR stations and DORIS beacons) Reference GPS constellation: JPL solution at IGS (orbits and clocks) – **fully consistent with IGS08**
Terrestrial Reference Frame	Extended ITRF2005 (SLRF/LPOD2005, DPOD2005, IGS05)	**Extended ITRF2008 (SLRF/ITRF2008, DPOD2008, IGS08)**
Earth orientation	Consistent with IERS2003 conventions and ITRF2005	**Consistent with IERS2010 conventions and ITRF2008**
Propagations delays	SLR Troposphere correction: Mendes-Pavlis SLR range correction: constant 5.0 cm range correction for Envisat, elevation dependent range correction for Jason DORIS Troposphere correction : CNET	SLR Troposphere correction: Mendes-Pavlis SLR range correction: constant 5.0 cm range correction for Envisat, elevation dependent range correction for Jason **DORIS Troposphere correction :**

	model	**GPT/GMF model**
	GPS PCO/PCV (Emitter and Receiver) consistent with constellation orbits and clocks (IGS05 Antex after GPS week 1400)	GPS PCO/PCV (Emitter and Receiver) consistent with constellation orbits and clocks (**IGS08 Antex**)
	GPS : Phase wind-up correction	GPS : Phase wind-up correction
Estimated measurement parameters	DORIS: 1 Frequency bias per pass, 1 troposphere zenith bias per pass SLR : bias per arc solved for a few stations, bias per pass for a few stations GPS: Floating ambiguity per pass, receiver clock adjusted per epoch	Unchanged
Tracking Data corrections	Jason-1 Doris data: South Atlantic Anomaly Model (JM Lemoine et al.) applied before and after DORIS instrument change DORIS datation bias for Envisat and Jason aligned with SLR before and after instrument change	Unchanged
Doris Weight	1.5 mm/s (1.5 cm over 10 sec) For Jason-1 , Doris Weight is reduced by a factor 10 before Doris instrument change	Unchanged
SLR Weight	10 cm	**15 cm**
GPS Weight	10 cm (phase) / 10 m (code)	**2 cm (phase) / 2 m (code)**