TMR Replacement Product Format Description: Version 1.0, January 29, 2007

Data record length = 44 bytes

This product provides all geophysical measurements available on the Jason-1 GDRs.
NOTE: In this product brightness temperatures without along-track averaging are provided, whereas the T/P MGDR provides averaged brightness temperatures.

Time tags, latitude, longitude, and flags (Parameters 1-6, and 9) are copied from the MGDR.

All data files are provided with big-endian byte ordering (e.g. HP, Sun). Linux machines will require byte swapping to convert to little endian.

NOTE: TMR_Bad is set to the following values:
3 (Bad) over land.
3 (Bad) if center point from along track averaging is missing.
>=1 (>= Fair) within 25 km from land.
>=1 (>= Fair) where >= 2 points missing from along track averaging.
>=1 (>= Fair) when interpolation of brightness temperatures is from measurements > 4 sec apart.
>= 2(>= Poor) when interpolation is actually extrapolation
>= 3(>= Fair) when interpolation failed.

NOTE: Wet path delay is set to default value when any of the following conditions occur.
Over land
When center point missing from along track averaging algorithm.
When any one of the brightness temperatures > 279.9 K.

Field	Parameter	Type	Dim	Size	Units	Description
1	Tim_Moy_1	Signed Integer	1	2	Day	Number of days since Jan 1, 1958, 00:00:00 (copy from MGDR)
2	Tim_Moy_2	Signed Integer	1	4	Milliseconds	Number of milliseconds within the day (copy from MGDR)
3	Tim_Moy_3	Signed Integer	1	2	Microseconds	Number of microseconds within the milisecond (Copy from MGDR)
4	Lat_Tra	Signed Integer	1	4	Microdegrees	Latitude (Copy from MGDR)
5	Lon_Tra	Signed Integer	1	4	Microdegrees	Longitude (Copy from MGDR)
6	Alt_Surface_type	Unsigned Integer	1	1	/	Altimeter surface type (Copy from Bit 1 of Geo_Bad_1 on MGDR)
7	Rad_Surface_Type	Unsigned Integer	1	1	/	Radiometer surface type (derived from Jason-1 land/sea map, and 50 km threshold.
8	TMR_Bad	Bit flag	1	1	/	Brightness temperature interpolation flag (Recomputed based on metrics from along track averaging algorithm, and brightness temperature interpolation algorithm.) (0=Good, 1 = Fair, 2 = Poor, 3 = Bad)
9	Instr_State_TMR	Bit Flag	1	1	/	Radiometer instrument state flag (copy from MGDR)
10	Tb_18	Signed Integer	1	2	0.01K	18 GHz brightness temperature (without along track averaging)
11	Tb_21	Signed Integer	1	2	0.01K	21 GHz brightness temperature (without along track averaging)
12	TB_37	Signed Integer	1	2	0.01K	37 GHz brightness temperature (without along track averaging)
13	Wet_H_Rad	Signed Integer	1	2	0.1 mm	Wet tropospoheric path delay correction
14	Atm_Att_Sig0_Corr_ku	Signed Integer	1	2	0.01 dB	2-way Atmospheric attenuation correction on Ku Band backscatter coefficient
15	Atm_Att_Sig0_Corr_C	Signed Integer	1	2	0.01 dB	2-way Atmospheric attenuation correction on C Band backscatter coefficients
16	wind_speed_rad	Unsigned Integer	1	2	cm/s	Radiometer wind speed
17	rad_water_vapor	Signed Integer	1	2	0.01 g/(cm*cm)	Radiometer water vapor content
18	rad_liquid_water	Signed Integer	1	2	0.01 kg/(m*m)	Radiometer liquid water content
19	Spare	Signed Integer	1	2	/	Spare
20	Spare	Signed Integer	1	4	/	Spare