6/18/2019 CORRIMUDATA

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CORRIMUDATA

Corrected IMU Measurements

Platform: OEM719, OEM729, OEM7500, OEM7600, OEM7700, OEM7720, PwrPak7, SPAN CPT7, SMART7-S,

SMART7-SI

Firmware Stream: OEM7, Agriculture

The CORRIMUDATA log contains the RAWIMU data corrected for gravity, the earth's rotation and estimated sensor errors. The values in this log are incremental values, accumulated over the logging interval of CORRIMUDATA, in units of radians for the attitude rate and m/s for the accelerations. Data output is not in the IMU Body frame, but is automatically rotated into the user configured output frame (configured with the **SETINSROTATION** command, default Vehicle frame).

The short header format, CORRIMUDATAS, is recommended, as it is for all high data rate logs.

CORRIMUDATA can be logged with the ONTIME trigger, up to a rate of 200 Hz.

Since the CORRIMUDATA log is synchronous, if you log at a rate less than full data rate of the IMU, the corrected IMU data is accumulated to match the requested time interval.

For asynchronous, full rate data, see the **IMURATECORRIMUS** log.

To obtain the instantaneous rates of acceleration (in m/s/s) or rotation (in rad/s) from the output values of measurements per sample rate (m/s/sample and rad/sample), multiply the output values by the CORRIMUDATA logging rate in Hz.

Message ID: 812

Log Type: Synch

Recommended Input:

log corrimudatab ontime 0.01

Example log:

#CORRIMUDATAA, COM1, 0, 77.5, FINESTEERING, 1769, 237601.000, 02000020, bdba, 12597; 1769, 237601.000000000, -0.000003356, 0.000002872, 0.000001398, 0.000151593, 0.000038348, -0.000078820*1f7eb709

Field	Field Type	Description	Format	Binary Bytes	Binary Offset
1	CORRIMUDATA Header	Log header. See <u>Messages</u> for more information.	-	Н	0
2	Week	GNSS week	Ulong	4	H+
3	Seconds	GNSS seconds from week start	Double	8	H+4
4	PitchRate	About x axis rotation (right-handed) (rad/sample)	Double	8	H+12

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Field	Field Type	Description	Format	Binary Bytes	Binary Offset
5	RollRate	About y axis rotation (right-handed) (rad/sample)	Double	8	H+20
6	YawRate	About z axis rotation (right-handed) (rad/sample)	Double	8	H+28
7	LateralAcc	INS Lateral Acceleration (along x axis) (m/s/sample)	Double	8	H+36
8	LongitudinalAcc	INS Longitudinal Acceleration (along y axis) (m/s/sample)	Double	8	H+44
9	VerticalAcc	INS Vertical Acceleration (along z axis) (m/s/sample)	Double	8	H+52
10	xxxx	32-bit CRC	Hex	4	H+56
11	[CR][LF]	Sentence Terminator (ASCII only)	-	-	-

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 $Email\ comments\ to\ \underline{NovAtel_TPUBS@NovAtel.com}$

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