

SCANNER BASIC PROFILES Table (Engineering Units)

Basic Scan Profile Identifier	Azimuth		Elevation		Description of the intended use of profile
	Basic Scan Position value [10-6 rad]	Basic Scan Rate value [10-6 rad/sec]	Basic Scan Position value [10-6 rad]	Basic Scan Rate value [10-6 rad/sec]	
0	0000000000	000000	-0000261799	000000	<i>no scan</i> ASM position IDLE ESM position IDLE
1	0000000000	000000	-0000794125	000000	<i>nadir</i> ASM new unused position pointing into telescope, mirror not used ESM pointing in nadir direction (-z) - start position for nadir_pointing_left
2	-0000785398	000000	-0000235322	000000	<i>limb scanning/pointing</i> ASM pointing in direction of velocity vector (-y) ESM pointing at an altitude of -3 km
3	-0000471239	000131	-0000170276	000000	<i>Sun scanning/pointing (start 17.2 km above horizon)</i> ASM following trajectory of sun from position of sunrise ESM pointing at an altitude of 370 km
4	0003298672	-008145	0000986111	000000	<i>ASM diffuser, subsolar calibration</i> ASM_Diffuser_1 - starting position +9 deg diffuser normal ESM pointing to mean sun elevation within sub-solar window
5	-0001003564	-000174	-0000212417	000000	<i>limb_mesosphere (start 150 km above horizon)</i> ASM following moon trajectory from mean position of the full moon (245 deg) - currently unused ESM pointing at an altitude of 153 km
6	-0000468621	000131	0002879793	000000	<i>Sun pointing with ESM diffuser</i> ASM following sun trajectory ESM diffuser in fixed ESM pos. of 180-15 deg - timing required for normal incidence of sun on ESM
7	-0006283185	000000	-0006283185	000000	<i>scanner maintenance</i> ASM position for 360 deg revolution of scanner bearings ESM position for 360 deg revolution of scanner bearings
8	-0000468621	000131	0000570714	000222	<i>mirror degradation, Sun scanning/pointing</i> ASM following sun trajectory ESM following sun via extra_mirror with half angular velocity from start at 150 km above horizon
9	-0000785398	000000	-0000194958	000000	<i>dark current (250 km above horizon)</i> ASM pointing in direction of velocity vector (-y) ESM pointing at an altitude of 264 km
10	0003263766	-008145	0000170480	000000	<i>ASM diffuser, internal wavelength calibration</i> ASM_Diffuser_2 - starting position +7 deg diffuser normal; ASM_diffuser_atmosphere ESM pointing to SLS (9.768 deg)
11	0003228859	-008145	0003319617	000000	<i>ASM diffuser, internal wavelength calibration with ESM diffusor</i> ASM_Diffuser_3 - starting position +5 deg diffuser normal ESM pointing diffusor to internal calibration sources (10.2 + 180 deg)
12	0003193953	-008145	0000183658	000000	<i>ASM diffuser, internal relative radiometric calibration</i> ASM_Diffuser_4 - starting position +3 deg diffuser normal ESM pointing to WLS (10.523 deg)
13	0003159046	-008145	0000186279	000000	<i>ASM diffuser, mirror degradation, moon scanning/pointing</i> ASM_Diffuser_5 - starting position +1 deg diffuser normal ESM pointing to WLS under non-optimal angle (10.673 deg)
14	-0000471239	000227	-0000233153	000000	<i>Sun direction (17.2km above horizon)</i> ASM following trajectory of sun from position of sunrise ESM pointing at an altitude of 17.2 km

Note: All positions are effective scanner positions.

Conversion algorithms of H/W- constellation are not considered.
All angular positions/rates are given in ASM/ESM scanner notation.

Description of the intended use of profile