The development status of ADEOS- II and GLI

2000,11,7

National Space Development Agency ADEOS- II Project

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1.The development status of ADEOS- ${\rm I\!I}$ and GLI

- The PFT (Proto-Flight Test) of ADEOS- II was started in May of last year.
- Most PFT items, including mechanical and thermal environment test, have been finished.
 ADEOS is currently being performed the final electric performance test.
- (3) GLI condition has been checked through the PFT, and there is no significant matter.

- 1.The development status of ADEOS- II and GLI (cont'd)
- (4) The PFT will be finished at the end of November.After the PFT, the satellite will be stored until March in next year.
- (5) After the satellite storage, preparation work for the launch will start.

The GLI mission data evaluation will be done in this storage period.

2. GLI performance test

After the PFT of ADEOS-II, GLI will be unloaded from the satellite, and GLI mission data evaluation test will be done.

(1) Objectives

The objectives of GLI mission data evaluation test is to confirm GLI flightworthiness before launch.
This is because after GLI was installed on ADEOS- II
GLI mission data have not been evaluated except onboard lamp calibration test for about 1.5 years.

2. GLI performance test (cont'd)

(2) Test plan

• The GLI mission data evaluation test basically consist of the same test items carried out in atmospheric condition at PFT.

• The study of additional data acquisition was requested through the discussion about GLI characterization reflecting phenomena happened in MODIS operation etc., the feasibility was studied and presented to the GLI calibration scientists.

2. GLI performance test (cont'd)

 Besides the mission data evaluation test, the development result of mechanisms in GLI and trends of main performance of critical functions will be reconfirmed.

(3) Schedule

GLI performance test will be carried out in the ADEOS- II storage period, and the schedule is shown in Fig.1.

GLI Mission Data Evaluation Test Schedule (Tentative)

	FY 12										FY 13			
	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	March	1st Quarter	2nd Quarter	3rd Quater
ADEOS-II Satallita Svatam			Satall	to Svot										
Activity	Satellite System PF I						tivity				Re-Integratiion			
					•					Storage	 	Post	- Storage Test Transportation to TNS(
											End-	to-End Test ▲	Re-Integration Launch Prepa	aration
GLI Mission Data Evaluation Test				Plannin	g			▼GLI	Frans. To	o Fujitsu		Return to Satellite		
		Ор	tical 1	Fest :	Study	CAL-WG	Duanau							
							Prepara		Testing Test Da	ata Ana	lysis (1)	Taat Data Analysia (2)		
												(TRD)		
	Trend	d Data Re	e-Anal	ysis :		Data (Check							
		SW2 Pelt	ier Ch	eck :		Analysis]-→∇N	ILI Exch	ange				
Others		Modific	cation	Study	▼NA	SDA Int	ernal Me	eeting fo	r the fina	al disicio	pn 			
		ADEC	DS-II S	Satellite	PFT Sup	oport]				Satellite Act	ivity Support I	nitial Orbit Phase
			1 41	itte D								(
	Level-I Algorithm Description Doc.													
		<u> </u>		I	I	<u> </u>	Ор	erationa	l Docum	ents	I			

November 07, 2000

3. Contents of GLI mission data evaluation test

- "GLI Mission Data Evaluation Test" is scheduled from Dec. 2000 to March 2001 under the ambient condition.
 - To verify the GLI optical performance is maintained after the 1999/07 delivery.
 - To obtain the additional user requirement data
- The basic test plan was studied and discussed with the GLI calibration scientists in October.

3. Contents of GLI mission data evaluation test (cont'd)

- The following user requirements were studied.
 - Reflectance and Polarization sensitivity against scan angle
 - Stray Light and Bright Target Recovery Response
 - Linearity
 - Thermal Band Output
- In case the difficulty to obtain the reliable data using GLI PFM exists, the alternative methods were discussed, such as witness sample measurement and additional PFT analysis.

GLI mission data evaluation test Item (Tentative)

		Proto-F	light Test	(PFT) ; 19	98-1999	GLI Special Performance Test ; 2000-2001		
			Ambient		/V	Health Check *	User Rea.	
	1	<u>VN⁄SW</u>	<u>N/SWI_MT_IVN/S</u>		MT			
1	Scan Angle	0	\diamond	\diamond	\diamond	confirmation using MTF data	_	
2	S∕N	0	-	0	-	PFT Equivalent	_	
3	ΝΕΔΤ	-	\diamond	-	0	-	-	
4	Dynamic Range, Linearity	0	1	0	0	Under Study		
5	MTF	0	\diamond	0	0	PFT Equivalent	_	
6	Polarization Sensitivity	0	I	_	I	Under	Study	
7	Stray Lights	0	0	_	I	additional PFT	data evaluation,	
8	Flare	\diamond		—	Ι		··· etc	
9	Optical Alignment	0	0	—	Ι	Analysis using MTF Data	_	
10	Inter Band Registration	0	0	0	0	Analysis using MTF Data	_	
11	Deviation of the Sensitivity	0	\diamond	0	0	PFT Equivalent	_	
12	Internal Lamp Calibration	0	-	0	-	PFT Equivalent	_	
13	Black Body Calibration	_	-	_	0	_	_	
14	Solar Light Calibration	\diamond	_	—	_	_	_	
15	Thermal Band Output	_	\diamond	-	_	PFT Equivalent	_	

O ∶ Test Data、 ◇ ∶ Reference Data