

B-200 (UC-12B) - LARC 11/25/13

Aircraft: [B-200 \(UC-12B\) - LARC](#) (See full schedule)

Flight Number: SLAP CFP

Payload Configuration: SLAP - Scanning L-Band Active Passive

Nav Data Collected: No

Total Flight Time: 4.2 hours

Submitted by: Gregory L. Slover on 12/02/13

Flight Segments:

From:	KLFI	To:	KLFI
Start:	11/25/13 14:26 Z	Finish:	11/25/13 16:50 Z
Flight Time:	2.4 hours		
Log Number:	14B003	PI:	Edward Kim
Funding Source:	Jared Entin - NASA - SMD - ESD Hydrology Program		
Purpose of Flight:	Check		
Comments:	<p>NASA Goddard's Scanning L-band Active Passive (SLAP) instrument suite consists of a rotating L-band radiometer (passive) and radar (active) nadir-mounted within a custom aerodynamic fairing on the NASA Langley UC-12B Huron aircraft (see attached figures). The diameter of the antenna is 46.08 in. The antenna rotates at 12 rpm. The instrument utilizes the existing forward research nadir port. The goal of this flight experiment is to measure soil moisture from an airborne platform utilizing the SLAP instrument. A taxi evaluation and three compatibility flight profile evaluations of the SLAP instrument and its associated aerodynamic fairing were conducted on November 22 and 25, 2013, respectively. The first two evaluation flights evaluated longitudinal, lateral and directional flying qualities, a roll evaluation for the SLAP sky-pointing maneuver, as well as simulated single-engine tests, stall evaluations and trim control power tests. Airspeed and altimeter calibrations were conducted against the NASA Langley SR22 safety chase aircraft at a variety of airspeeds. During the second evaluation flight, a maximum airspeed with the fairing installed of 190 KIAS was established. The third evaluation flight consisted of multiple landings. No unacceptable flying qualities were noted and very minimal performance changes were noted from the normal UC-12B handling qualities. The fairing was removed for inspection following the third evaluation flight and no failures or faults were discovered. In conclusion, RSD considers the compatibility flights complete with no limiting parameters established other than the maximum tested airspeed of 190 KIAS. The pilots for these flights were Richard J. Yasky, Jr., Head, Operations and Engineering Branch, Research Services Directorate (RSD), and Gregory L. Slover, RSD, NASA Langley. The photographer in the SR22 chase aircraft was Michael S. Wusk, OEB/RSD.</p>		

From:	KLFI	To:	KLFI
Start:	11/25/13 18:25 Z	Finish:	11/25/13 19:37 Z
Flight Time:	1.2 hours		
Log Number:	14B003	PI:	Edward Kim
Funding Source:	Jared Entin - NASA - SMD - ESD Hydrology Program		
Purpose of Flight:	Check		
Comments:	See summary for CFP above.		

From:	KLFI	To:	KLFI
Start:	11/25/13 20:35 Z	Finish:	11/25/13 21:12 Z
Flight Time:	0.6 hours		
Log Number:	14B003	PI:	Edward Kim
Funding Source:	Jared Entin - NASA - SMD - ESD Hydrology Program		
Purpose of Flight:	Check		
Comments:	See CFP summary above.		

Flight Hour Summary:

14B003

Flight Hours Approved in SOFRS	35.5
Total Used	20.3
Total Remaining	15.2

14B003 Flight Reports						
Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining	Miles Flown
11/25/13	SLAP CFP	Check	2.4	2.4	33.1	
11/25/13	SLAP CFP	Check	1.2	3.6	31.9	
11/25/13	SLAP CFP	Check	0.6	4.2	31.3	
12/02/13	SLAP ICF#1	Check	2.5	6.7	28.8	
12/03/13	SLAP ICF#2	Check	2.3	9	26.5	
12/16/13	SLAP R 003	Science	4.3	13.3	22.2	
12/18/13	SLAP R004	Science	3.7	17	18.5	
12/18/13	SLAP R005	Science	3.3	20.3	15.2	

Flight Reports began being entered into this system as of 2012 flights. If there were flights flown under an earlier log number the flight reports are not available online.

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