



Bellcomm

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date: August 2, 1971

to: Distribution

from: T. B. Hockstra

subject: Apollo 15 LM Descent
Case 310

B71 08014

The enclosed charts summarize the Apollo 15 LM descent. This data was obtained by timing events on a recording of the crew voice readouts. Chart 1 shows nominal and actual LM descent events - performance was extremely close to nominal.

Chart 2 shows the altitude vs. time from an altitude of 1000 ft. to touchdown. Manual control (P66) was assumed at an altitude of about 360 ft. and landing occurred about 77 sec. later. About 95 sec. was required to descend from an altitude of 700 ft. - this is 55 sec. less than allotted in the propellant budget (only 15 sec. longer than an automatic descent).

Chart 3 shows the altitude vs. altitude rate after initiation of P66.

Chart 4 shows the nominal and actual LPD angle vs. time. The crew apparently redesignated short (uprange) at an altitude of about 4000 ft. and then may have redesignated long shortly after passing 3000 ft.

T. B. Hockstra
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CHART 1

APOLLO 15 LM DESCENT EVENTS

EVENT	TIME PAST IGNITION - MIN.: SEC.	
	NOMINAL	ACTUAL
IGNITION (10% THRUST)	:00	:00
FULL THROTTLE POINT	:26	:24
NOON 69 ENTER (ARLS)	2:00	1:34
LANDING BOARD LOCISON	2:06	3:29
THROTTLE DOWN	7:24	7:23
NIGHTGATE (P66)	9:24	9:32
LOWGATE (700 FT)	10:42	10:41
TAKEOVER (P66)	---	10:59
TOUCHDOWN	{ 12:02 AUTO	12:16
	{ 13:12 GWSGT }	

* FROM RECORDING OF CAR AND
LMP VOICE RECORDS

CHART 2

APOLLO 13

ALTITUDE VS. TIME TO TOUCHDOWN*

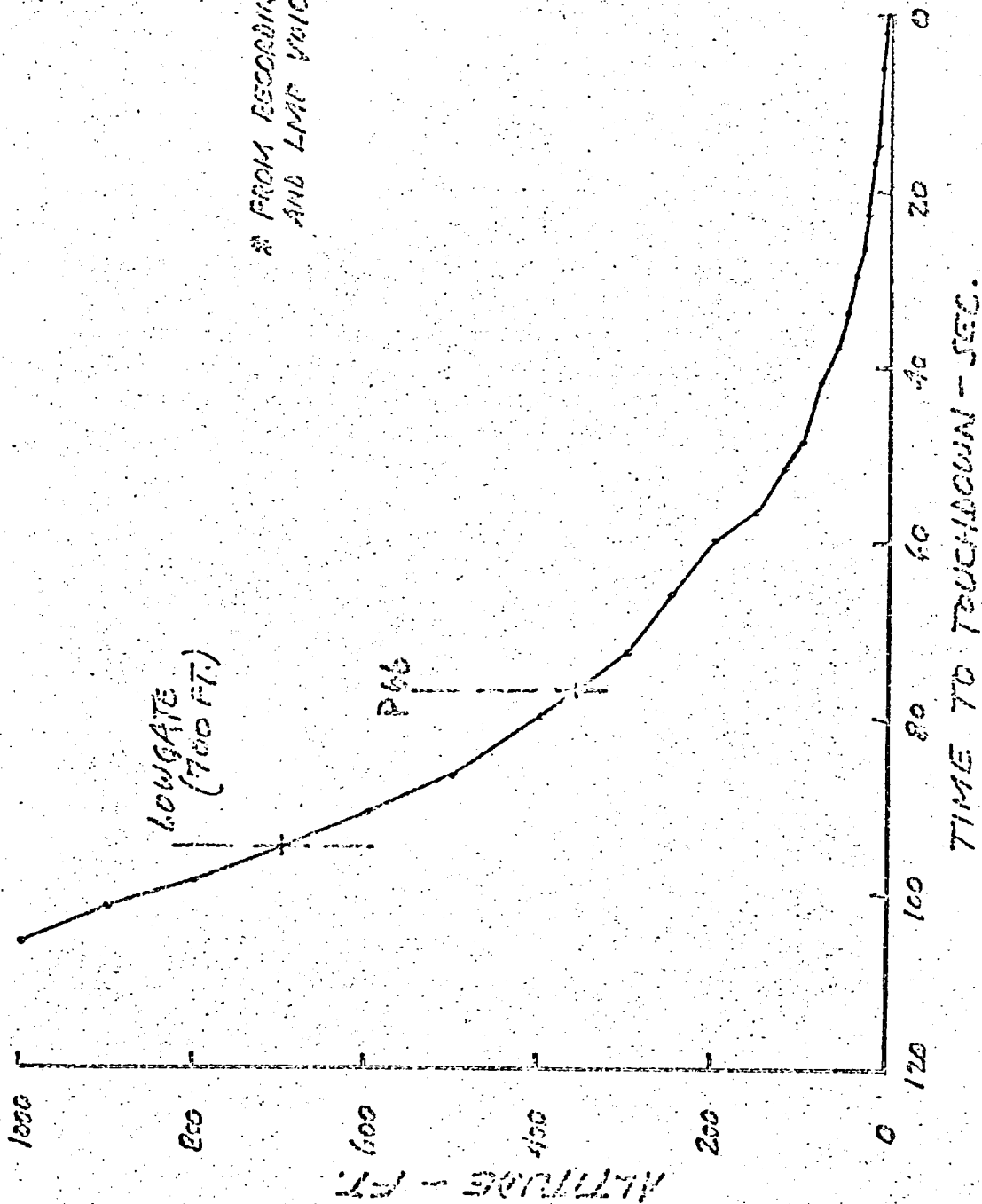


CHART 3

APOLLO 15 ALTITUDE VS. ALTITUDE RATE*

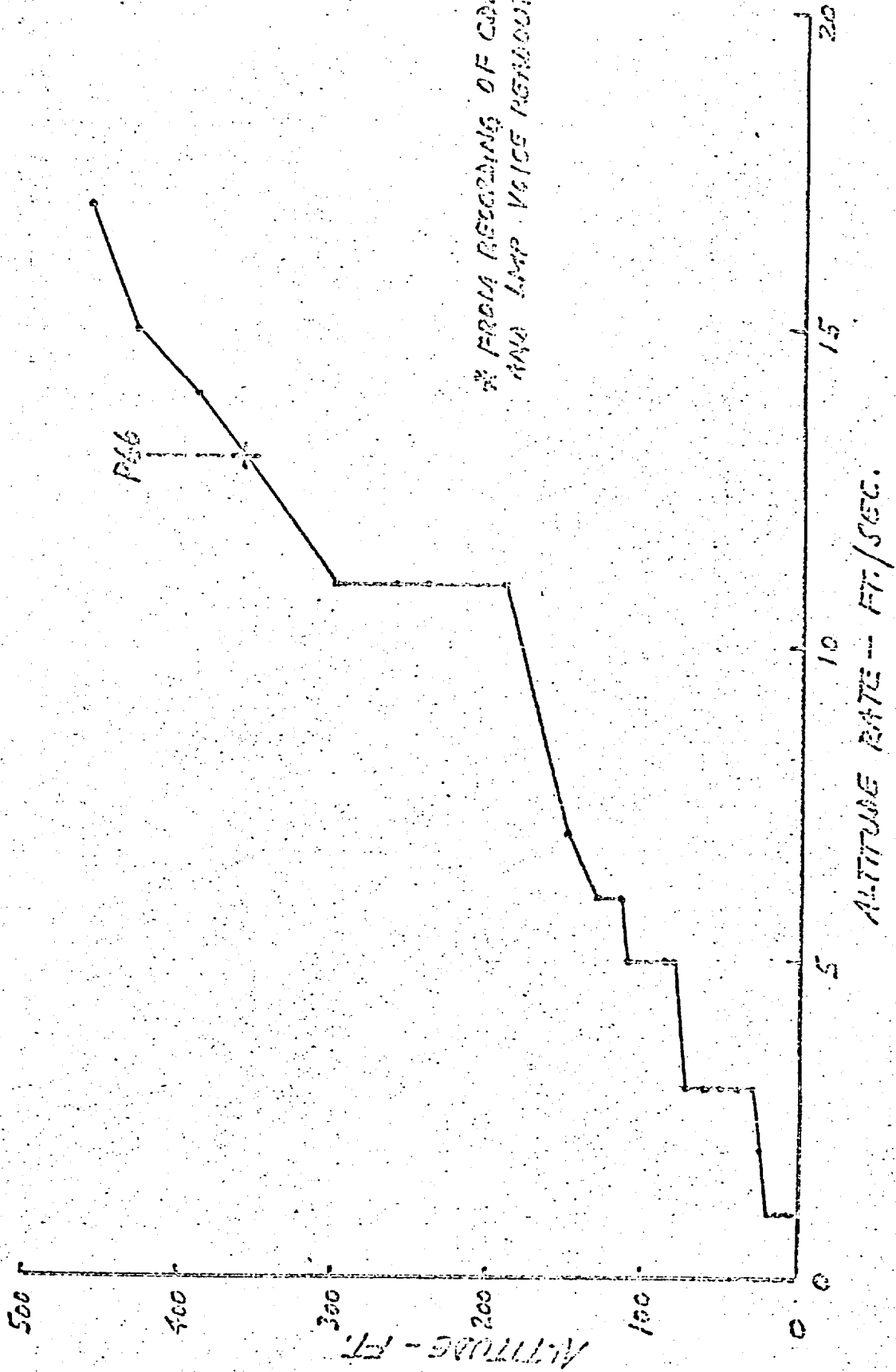
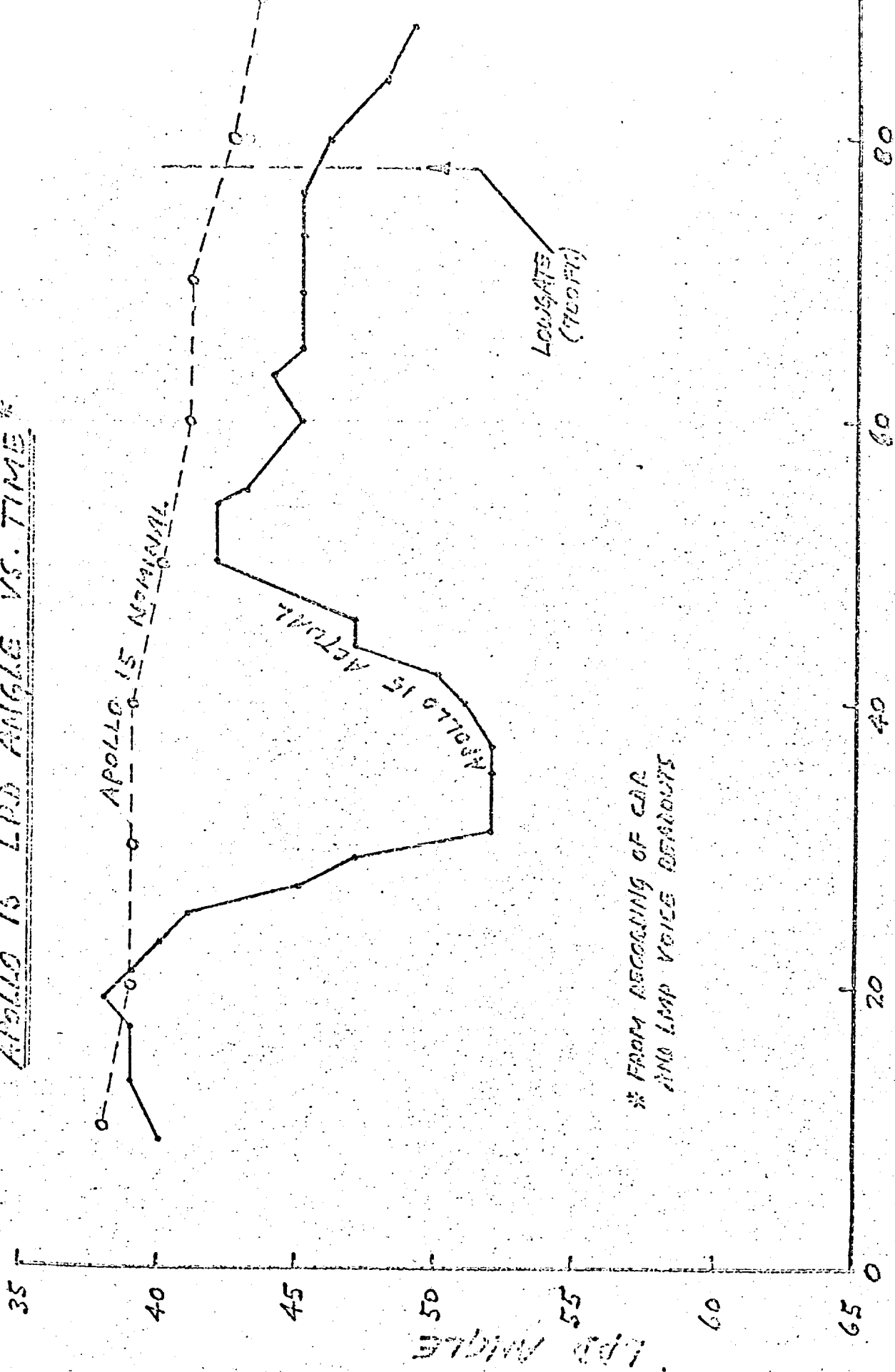


CHART A

APOLLO 15 LPD ANGLE VS. TIME



* FROM RECORDING OF CAR AND LAMP VOICE RECORDS

TIME PAST HIGHGATE - SEC.

LOWGATE (750770)