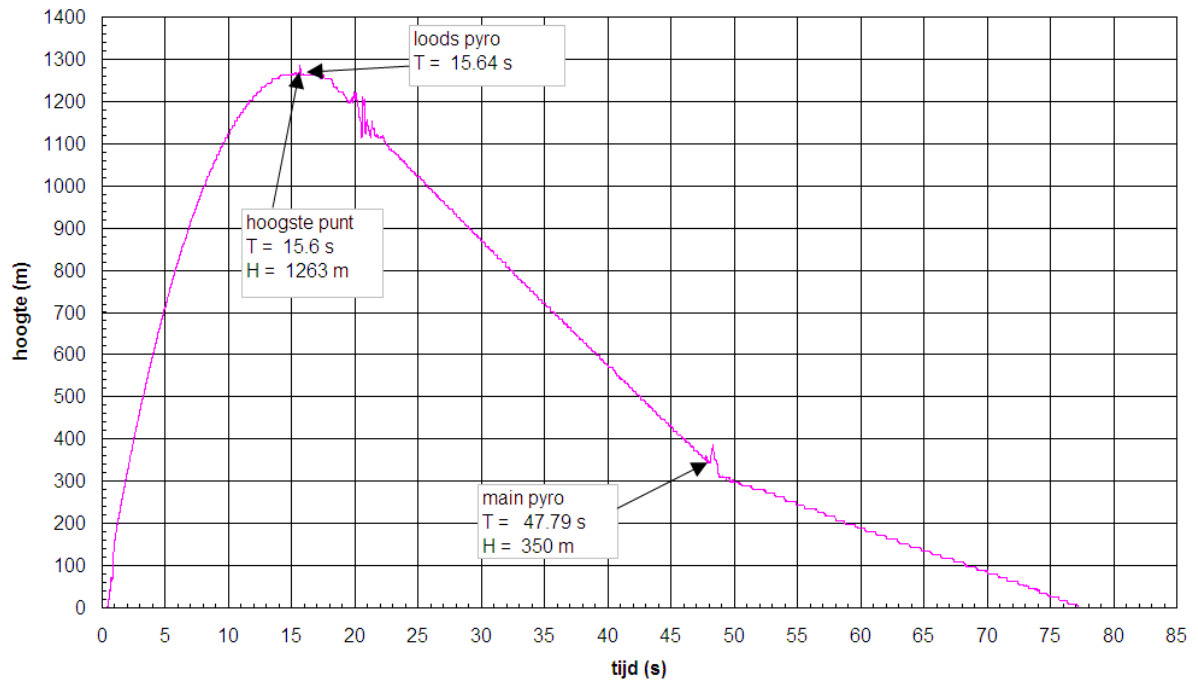
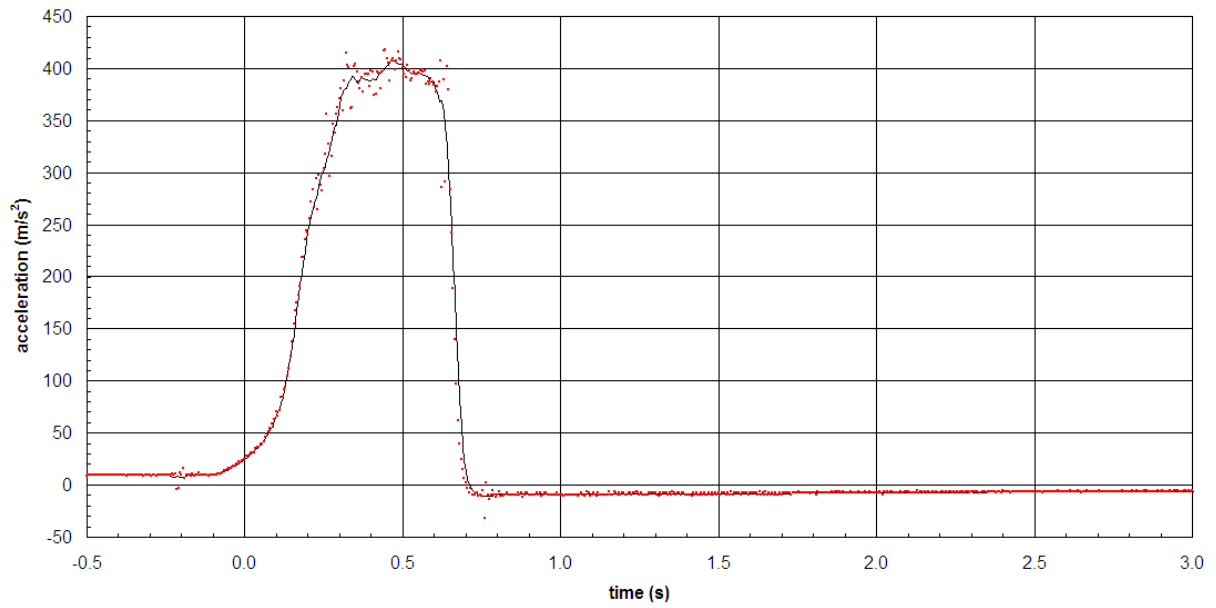


H13A gegevens raket en atmosfeer				input	calculated	TBD	offset matching for various sensors		
							RDAS com	RDAS Tiny	RDAS Tiny
Pressure sensor calibration				OK			MPXA4100	MPXH6115	MPXH6115
parameter	RDAS def.	datasheet	matched				datasheet	datash.(1)	datash.(2)
offset	143.6	105.6	101.5	mbar			241.7	123.9	106.2
sensitivity	5.295	4.50	4.50	mV/mbar			5.295	4.59	4.50
gain	0.9222	1.0851	1.0851	mB/count			0.9222	1.0638	1.0851
				^					^
Atmospheric properties				OK					
parameter	SA1962	on-board	meteo						
Po	1013.25	1001.0	1001	mbar		RDRS 7-5-2010			
rho	1.2250		1.2388	kg/m ³					
To	288.16		281.5	K		RDRS 7-5-2010			
lambda	-0.0065			K/m					
R	287.05			m ² /s ² K					
g	9.81			m/s ²					
Rocket data									
parameter	designed	measured	matched			H13A gegevens:			
Mvol		10.20		kg		RDRS 7-5-2010			
Mb		1.47		kg		Basic RSDS			
Mleeg		8.73	8.730	kg					
diameter	100			mm		Basic RSDS			
Aref	0.007854			m ²					
Cd (t=1 s)		0.5							
tb		0.85		s		start integratie bij -0.1 s			
Accelerometer data				OK					
parameter	default	datasheet	measured						
offset	0g		518.8	cnt		reconstructed from tower average			
sensitivity	38		38.00	mV/g		not calibrated, assume default			
gain [g]			0.12850	g/cnt					
gain [m/s ²]			1.2605	m/s ² /cnt					
Gyroscope data									
parameter									
offset X									
offset Y									
offset Z									
sensitivity +/-8%									
gain +/-8%									
Trajectory geometry data				OK					
parameter									
tower elevation	83	degrees	1.449	rad		RDRS 7-5-2010			
tower azimuth	18.0	degrees	0.314	rad		RDRS 7-5-2010			
tower length			7.5	m		RDRS 7-5-2010			
Berekeningen resultaten				OK					
v max	184.4	m/s	0.7	s		start integratie bij -0.1 s			
V toren	70.3	m/s	7.5	m					
t toren	0.36	s				start integratie bij -0.1 s			
v end	183.6	m/s	0.75	s		start integratie bij -0.1 s			
h end	61	m	0.75	s		start integratie bij -0.1 s			
impuls	1832	Ns							
spec. impuls	127.2	s				Isp matching Mleeg	8.730		
av. acc (t = -2...-1 s)	511.07	count		m/s ²		flight data, not calibration!			
reconstr "0 g"	518.80	count		m/s ²		= av.acc(t<0) + sin(elev)/gain			
NB: accelerometer signaal heeft negatieve polariteit									

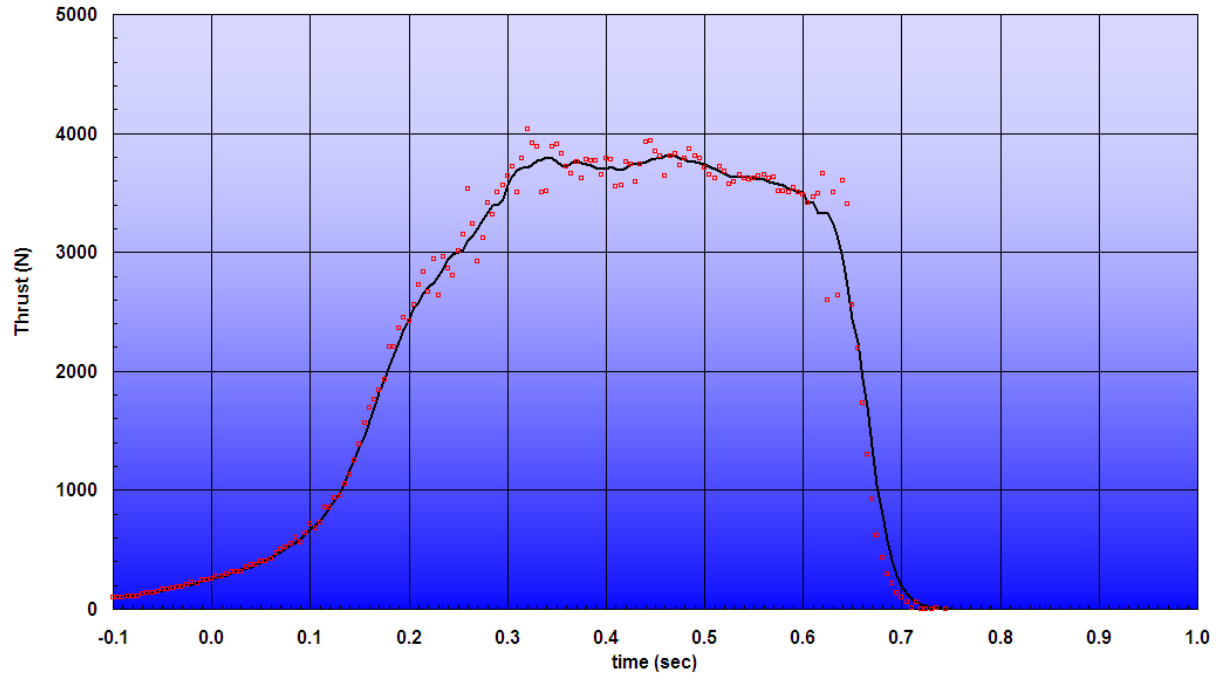
H13A drukhoogte 7-5-2010



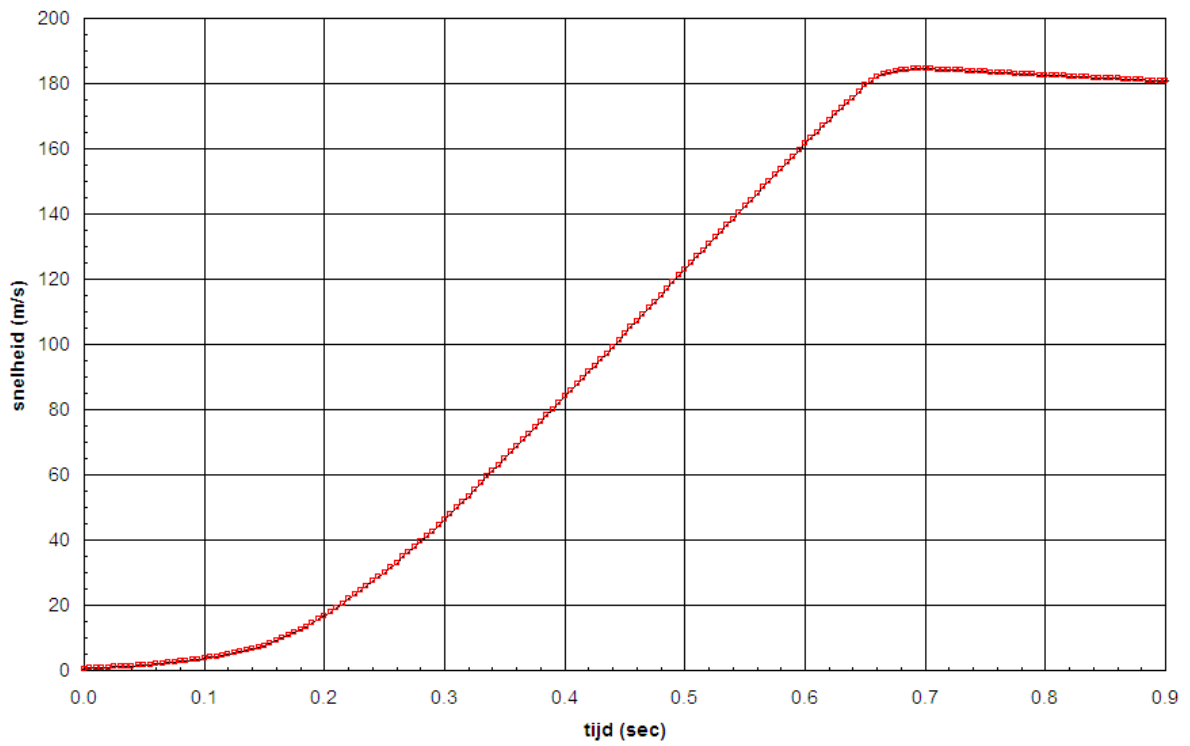
H13A accelerometer data 7-5-2010



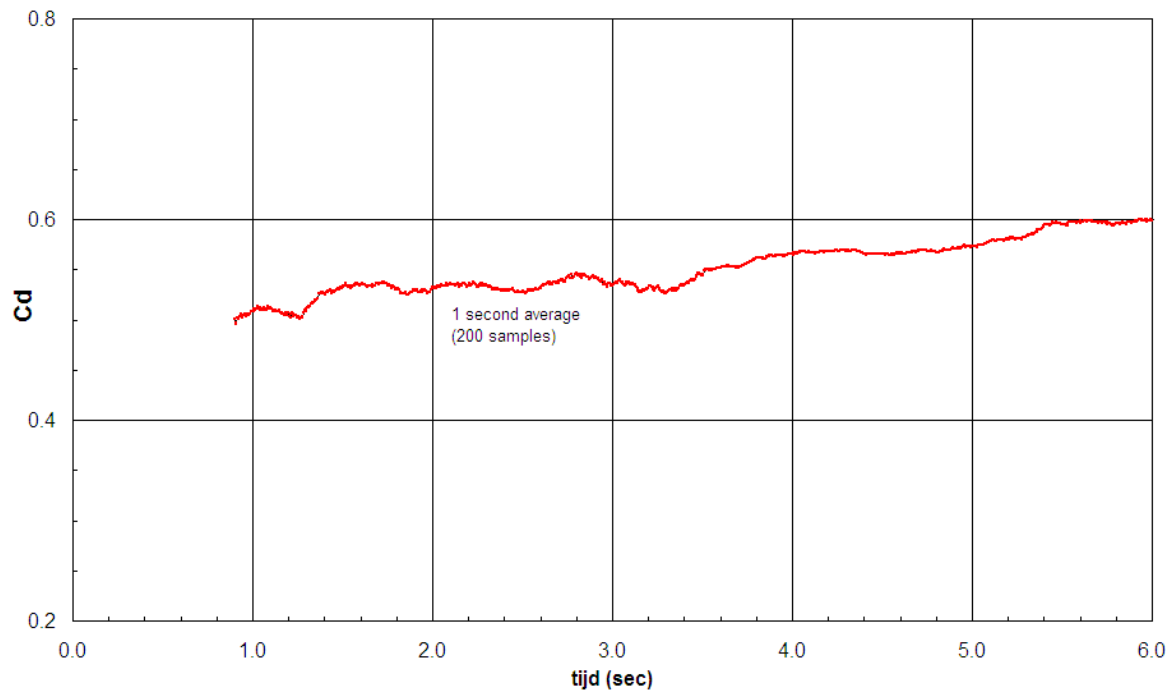
H13A reconstructed thrust
7-5-2010



H13A integrated acceleration
7-5-2010



H13A drag 7-5-2010



H13A integrated velocity 7-5-2010

