Simona Olson NOAA-18
Agency supporting the mission: NOAA/NASA
Mission orbital parameters

Purpose	Precession rate	Orbit radius	Long. of ascending node	Inclination	Repeat time
Weather Observations	Sun synchronous	a=854km	170.84 W	98.9°	102.0min

Instr. Name	purpose	Wavelen range (units)	# of Channels	Spectr resol (units)	Horiz swath (units)	Horiz resol (units)	Vert resol (units)	Data rate	Launch- & end dates
AVHRR/3	View vegetation, snow, clouds, ice Channel: 1(cloud,surface mapping-day) 2(land-water boundaries) 3A(snow,ice,cloud-day) 3B(cloud mapping,SST-night) 4(cloud mapping,SST-night) 5(SST)	.5µm-12.5µm .58-.68 .725-1 1.58-1.64 3.55-3.93 10.3-11.3 11.5-12.5	6		2400 km	1.09 km		200 kwps	Launch: May 1998 End: >5/20/07
HIRS/4	Derive temperature, water vapor, ozone, cloud liquid water content Channel: 1 2 3 4 5(temperature) 6 7 8(window surface, cloud top temp) 9(ozone) 10 11 (water vapor) 12 (water vapor) 13 14 15 16 17 18(window, Land temps, SST) 19(window) 20(window, visible-clouds)	.69µm - 15µm 14.95 14.71 14.49 14.22 13.97 13.64 13.35 11.11 9.71 12.47 7.33 6.52 4.57 4.52 4.47 4.45 4.13 4.00 3.76 0.690	20		2160 km	10.2 km	(vert depth)40 km	2.88kbps	Launch: 5/20/05 End: >5/20/07
AMSU/A1 AMSU/A2 (AMSU/A2) (AMSU/A1)	Derive atmospheric temperature profiles Channel: 1(total precipitable water vapor, sea ice, cloud ice, snow) 2(precip/surf emissivity, clw, sea ice, snow) 3(surf emissivity, clw) 4(temp) 5(temp) 6(temp) 7(temp) 8(temp) 9(temp) 10(temp) 11(temp) 12(temp) 13(temp)	Band: 23000-80000 MHz 23800 31400 50300 52800 52359 54400 54940 55500 57290 57290 57290 57290 57290	15		2343 km	48 km	(vert depth)48 km	3.2 kbps	Launch: 5/20/05 End: >5/20/07

	14(temp) 15(precip/surf emissivity, cloud ice, snow)	57290 89000							
AMSU/B	Derive humidity profiles Channel: 16(precip/surf emissivity) 17(cloud ice) 18(water vapor) 19(water vapor) 20(water vapor)	GHz 89 150 183 183 183	5						
MHS	Derive humidity profiles Channel: H1(temperature,emissivity) H2(humidity profile) H3(humidity profile) H4(humidity profile) H5(humidity profile)	Band: 89-190 GHz 89.0 157.0 183.3 183.3 190.3	5		1920 km	16 km		3.2 kbps	Launch: 5/20/05 End: >5/20/07
SEM-2	Earth radiation belts/ charged particle precipitation	Energy range: 0.05 to 20 keV							Launch: 5/20/05 End: >5/20/07
SBUV/2	Ozone measurements	170nm-400nm	12	1 nm	120/170 km	170 km			Launch: 5/20/05 End: >5/20/07
SARR SARP (SARSAT)	Detect emergency locator transmitter	Band: 121.5 - 406 MHz						2.4 kbps	Launch: 5/20/05 End: >5/20/07
DCS-2	Collect meteorological data such as temperature, pressure, currents-receives info	Band: 80-401 MHz				150 m		400 bps	Launch: 5/20/05 End: >5/20/07

Good reference web pages:
http://goespoes.gsfc.nasa.gov/poes/instruments/index.html
http://www.ncdc.noaa.gov/oa/pod-guide/ncdc/docs/klm/index.htm
http://www2.ncdc.noaa.gov/docs/klm/index.htm
http://www.oso.noaa.gov/poesstatus/spacecraftStatusSummary.asp?spacecraft=18
http://www.wmo.int/pages/prog/sat/CGMS/Directoryofapplications/en/ap10-09.htm
http://www.osdpd.noaa.gov/PSB/MSPPS/noaa18channels.html
Satellites

1. Aqua (NASA, 6 sensors)
2. Terra (NASA, 5 sensors)
3. Aura (NASA, 4 sensors)
4. Active Particulate Sensors (NASA: Cloudsat, Calypso, TRMM),
5. NOAA-18 (7 sensors)
6. GOES (5 sensors + GOESS-R)
7. DMSP (7 sensors?)

Future homework
Altimeters and Scatterometers
NPOESS
NPP

AVHRR-Advanced Very High Resolution Radiometer
HIRS-High Infrared Radiation Sounder
AMSU-Advanced Microwave Sounding Unit
MHS-Microwave Humidity Sounder
SEM-Space Environmental Monitor
SBUV-Solid Backscatter Ultraviolet Radiometer
SARSAT-Search and Rescue Satellite
DCS-Data Collection System