

Table 1. Comparison of geologic units of the Hellas region of Mars in the present map with those in the eastern equatorial and south polar geologic maps of Greeley and Scott (1972) and Tanaka and Scott (1975), respectively.

Unit symbol and name in this map	Unit symbol in U.S. Geological Survey maps
As, apron material	As
As, etched material	NH, NHP, AH, s
Plains materials	
Smooth plains unit	Np, Hp, Ah
Younger smooth plains unit	Np, Hp, Ah, s
Older smooth plains unit	Np, Hp, Ah, s
Ridged plains material	Np, Hp, Ah, s
Older ridged plains material	Np, Hp, Ah, s
Older ridged plains material	Np, Hp, Ah, s
Hellas Planitia Assemblage	
Interior units	Np, Hp, Ah, s
Amphitrite Formation	Np, Hp, Ah, s
Thyrrhena Patra Formation	Np, Hp, Ah, s
Hadriaca Patra Formation	Np, Hp, Ah, s
Basin rim units	Np, Hp, Ah, s
Plateau Sequence	Np, Hp, Ah, s
Crater materials	Np, Hp, Ah, s

DESCRIPTION OF MAP UNITS

(Material units defined by geomorphology, geologic associations, and crater histories. Two-dimensional positions based on topographic elevations and crater densities (see table 2 and text). Some units previously defined by Greeley and Scott (1972), Tanaka and Scott (1975), Greeley and Cross (1976), and Cross and others (1975). Crater density indicated by new units. Brief descriptions given for some discussed terrain in map text.)

- As** Apron material—Smooth, lobate deposits on slopes of steep massif material (unit Np) and inner basin walls. Apron material overlies all surrounding units and rim, excepting those units which are higher than basin rim. Deposits typically extend a few to more than 10 km from source area. Apron material overlies all surrounding units and rim, excepting those units which are higher than basin rim. Deposits typically extend a few to more than 10 km from source area. Apron material overlies all surrounding units and rim, excepting those units which are higher than basin rim. Deposits typically extend a few to more than 10 km from source area.
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HELLAS PLANITIA ASSEMBLAGE

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HELLAS RIM ASSEMBLAGE

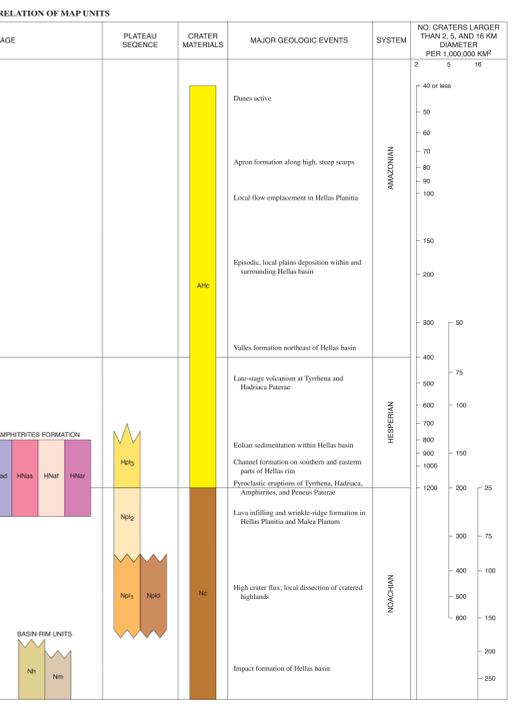
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CRATER MATERIALS

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PLATEAU SEQUENCE

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Table 2. Area and crater densities of selected geologic units in the Hellas region of Mars. N/A equals number of craters < 0.4 km in diameter per 10^4 km^2. Standard error equals the square root of the number of craters divided by the area.

Map unit	Symbol	Area (km^2)	N(2)	N(5)	N(10)	Ref.
Younger smooth plains unit	Asp	182,937	—	70-22	—	1
Valles unit	Av	86,664	—	92-23	—	1
Valles unit	Av	85,947	239-72	109-49	—	2
Flank member, Thyrrhena Patra Fin	Hf	80,276	297-79	87-33	—	1
Flank member, Thyrrhena Patra Fin	Hf	203,510	—	118-24	—	1
Smooth interior unit	Hs	73,256	—	119-40	—	1
Plains interior unit	Hpi	230,341	234-32	201-12	—	1
Hammock interior unit	Hi	267,626	187-26	75-17	15-7	2
Hammock interior unit	Hi	227,626	—	56-14	7-4	1
Knobby interior unit	Hk	241,749	—	62-16	—	1
Smooth interior unit	Hs	397,106	178-21	20-7	—	1
Smooth interior unit	Hs	397,106	—	161-20	13-6	1
Smooth unit, plateau sequence	Hsp	200,757	—	161-20	—	1
Younger ridged plains material	Hyr	535,281	—	209-19	60-11	1
Etched material	He	100,173	—	230-48	—	1
Dissected member, Amphitrite Fin	Hd	1,340,648	347-20	133-16	27-7	4
Shield member, Amphitrite Fin	Hns	42,413	—	189-67	47-3	1
Older ridged plains material, Malesa Patra Fin	Hpr	440,990	384-30	159-19	34-9	4
Older ridged plains material	Hpr	546,075	—	201-42	67-11	1
Younger dissected unit	H2p	188,076	466-49	132-27	—	1
Younger dissected unit	H2p	205,141	559-44	242-29	37-11	2
Younger dissected unit	H2p	205,141	—	184-23	10-6	1
Older dissected unit	H1p	119,478	501-65	184-29	42-9	2
Etched material	He	100,173	—	230-48	59-22	1
Flank member, Hadriaca Patra Fin	Hf	103,689	572-75	173-41	—	1
Flank member, Hadriaca Patra Fin	Hf	93,776	—	213-48	64-26	1
Older ridged plains material, Hellas Planitia	Hpr	295,244	406-37	188-25	54-14	4
Summit shield member, Thyrrhena Patra Fin	Ns	114,224	—	201-42	261-5	1
Shield member, Thyrrhena Patra Fin	Ns	32,860	654-214	404-179	—	5
Subsided crater unit, plateau sequence	Np	684,234	—	483-27	175-46	1
Dissected unit, plateau sequence	Np	410,396	—	669-40	219-23	1
Etched unit, plateau sequence	Np	179,489	—	614-40	198-22	1
Hilly unit, plateau sequence	Np	1,340,648	—	549-20	186-12	4
Mixed unit	Np	284,170	—	294-48	49-15	1

The area units, where the crater count is provided from multiple reference sources. The source is: (1) Derived from crater densities described in Greeley (1976). Only reported craters included for Ammonites and Hesperian units. (2) Data from this map. (3) Data from Cross and others (1972). (4) Not stippled does not exactly match this map. (5) Data from Greeley and others (1975). (6) Data from Greeley and others (1975).

GEOLOGIC MAP OF THE HELLAS REGION OF MARS

By Gregory J. Leonard and Kenneth L. Tanaka 2001