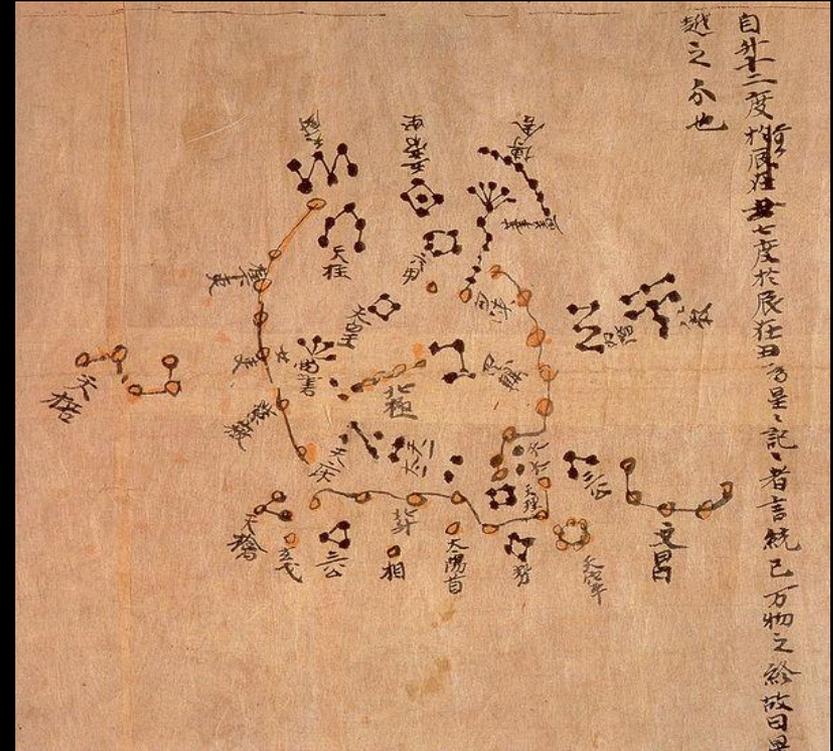


HISTÓRIA DA OBSERVAÇÃO DE MARTE

ASTRONOMIA ANTIGA

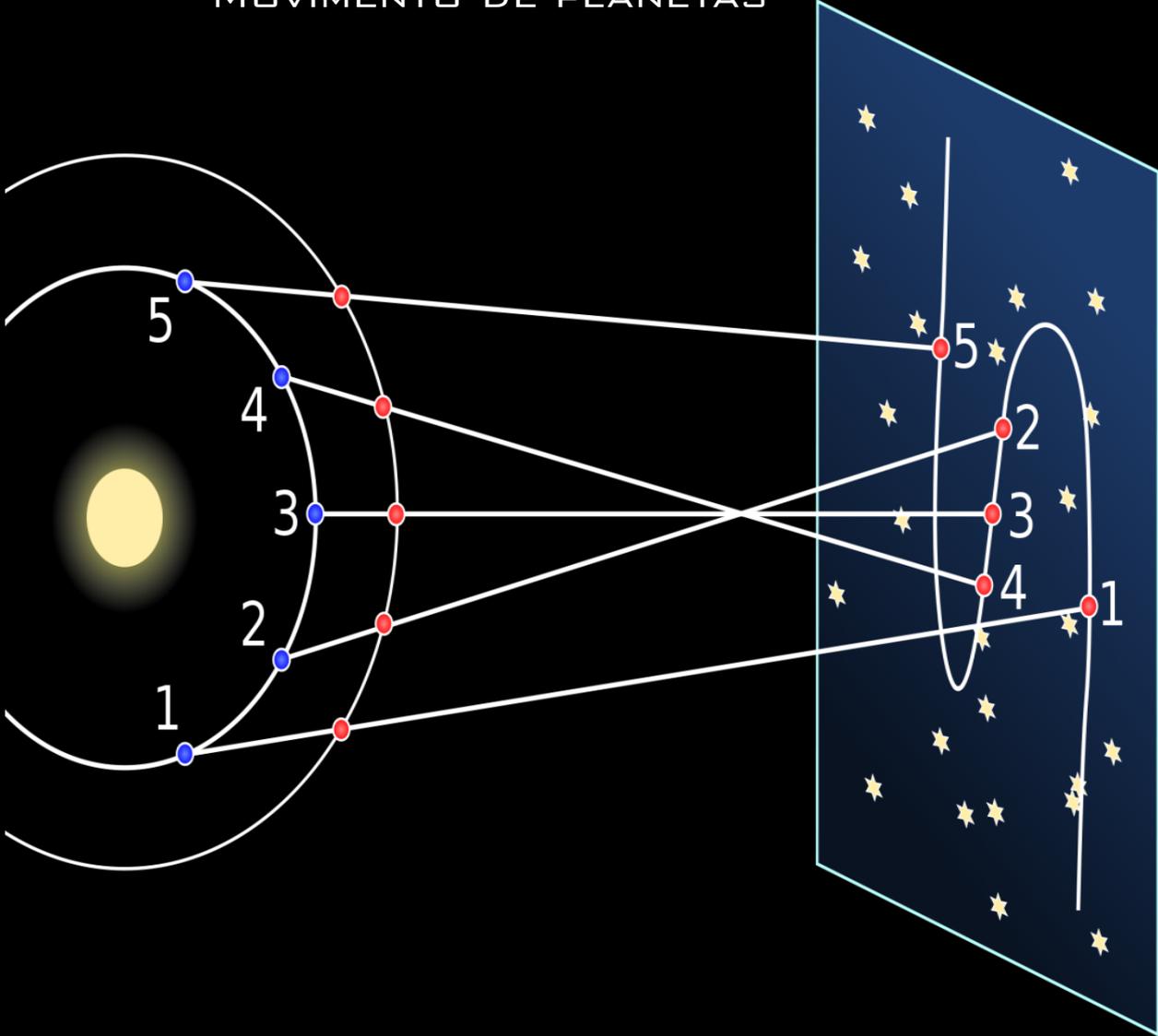


EGITO ~2000 A.C.
PRIMEIROS RELATOS
DE OBSERVAÇÕES



CHINA ~1045 A.C.
RELATO DE POSIÇÕES DE
MARTE ANTES DA
DINASTIA DE ZHOU

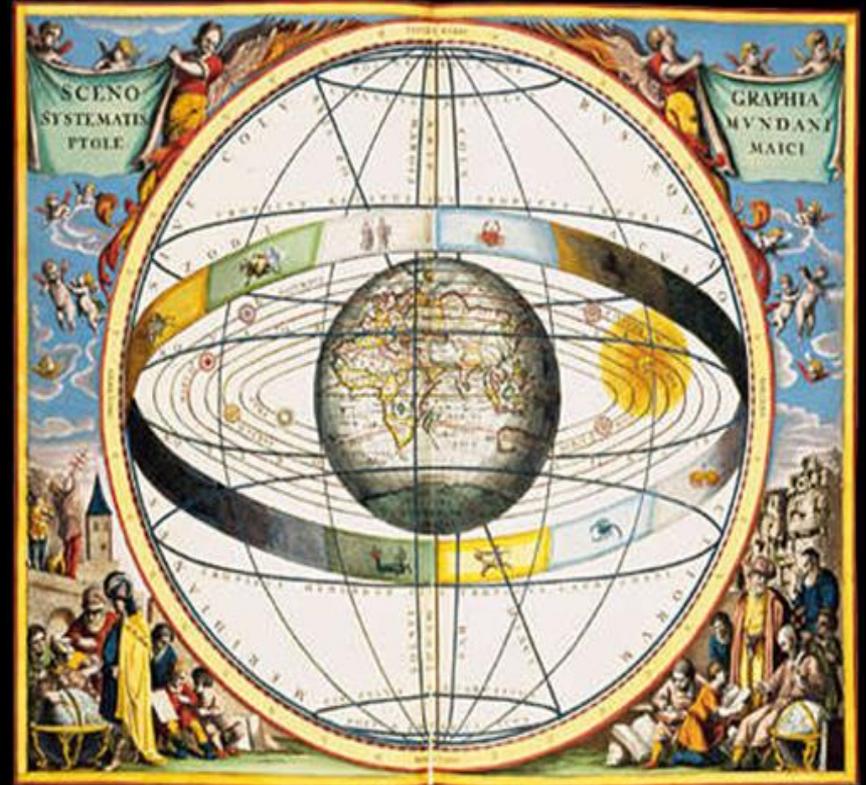
MOVIMENTO DE PLANETAS



ASTRONOMIA ANTIGA



ASTRÔNOMOS BABILÔNICOS
DETALHARAM POSIÇÕES DE
MARTE COM DESENVOLVIMENTO
DA ARITMÉTICA



PENSADORES E ASTRÔNOMOS
GREGOS/HELÊNICOS
DESENVOLVERAM MODELO
GEOCÊNTRICO PARA EXPLICAR
MOVIMENTO DE PLANETAS

ASTRONOMIA ANTIGA



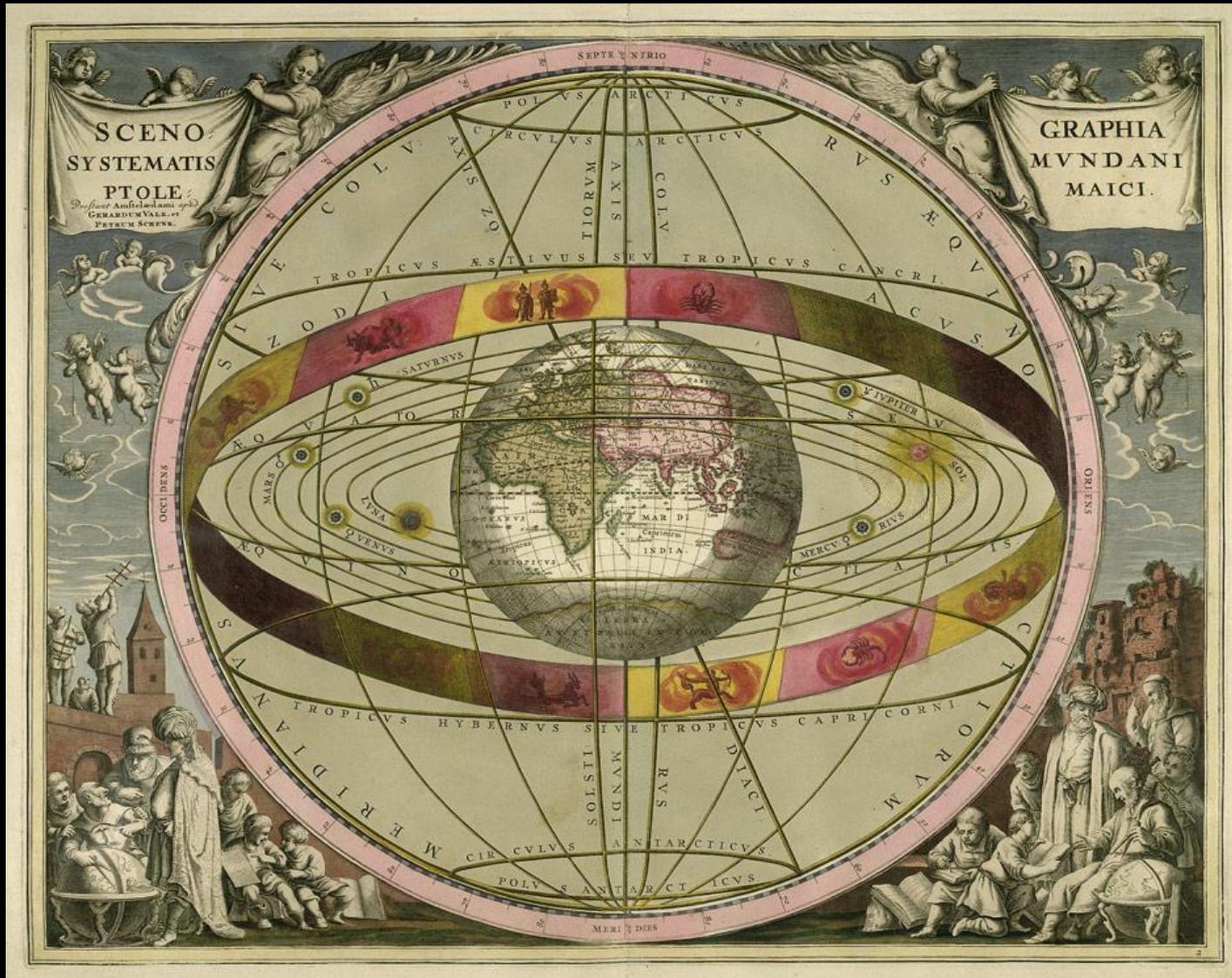
نصف القطر فانزلنا منه خطا حتى نروي القطب لانه من مركز
 تركيب على ذلك الصفة فبعد ان استرودور كراهة ونخرج اذ
 ربعا خطان على اذنا فانهم ونخرج عمودا يكون نسبة
 البكسنة في المدة ونخرج عمودا في رده طرسم ونتم سطح اذ
 بعد ان جعلنا خطا تم مثل آه فلان نسبة آه الى البكسنة فان
 المدة وسم مثل آه يكون نسبة سم الى آه ضرب سم في آه و
 بينة الهندسية في توفرا الاصول ضرب سم في آه و ضرب آه في سم
 ما في فكيره سطح لسا ويا سطحه في ومحمد سطح ط
 شتر كما فكيره سطح طه مساو لسطح ط فان علمنا اضمارا
 الابعاد وخطاه طم و بر على نقطة كما سيرة الجوريس
 في نظر القائل الاول من كتاب الخوطات والشكل
 وة من القائل الثاني من هذا الكتاب اذ هذا العمل تم بهذا

INDIANOS E ISLÂMICOS ANTIGOS ESTIMARAM O TAMANHO DE MARTE E SUA DISTÂNCIA DA TERRA

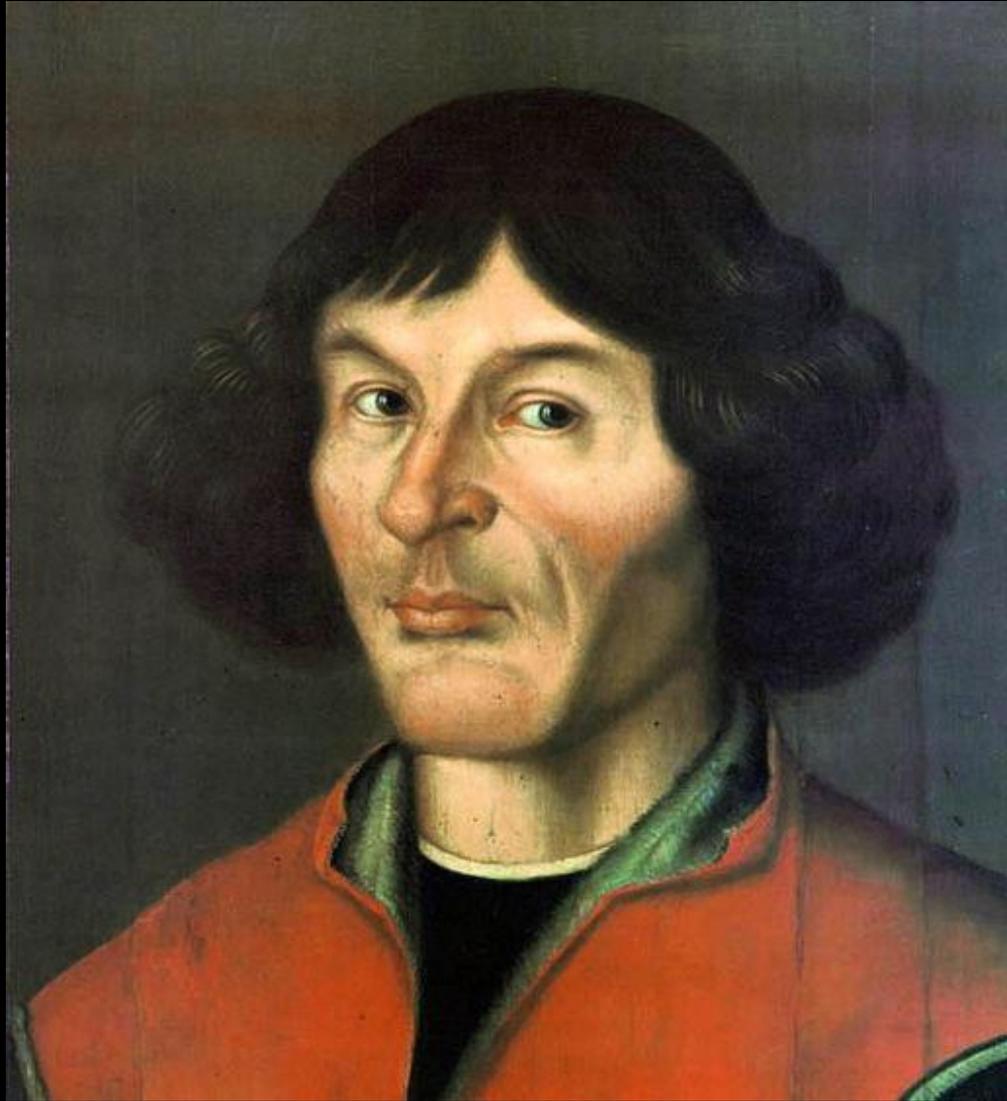
PTOLEMEU – ALEXANDRIA,
EGITO ~70 D.C.



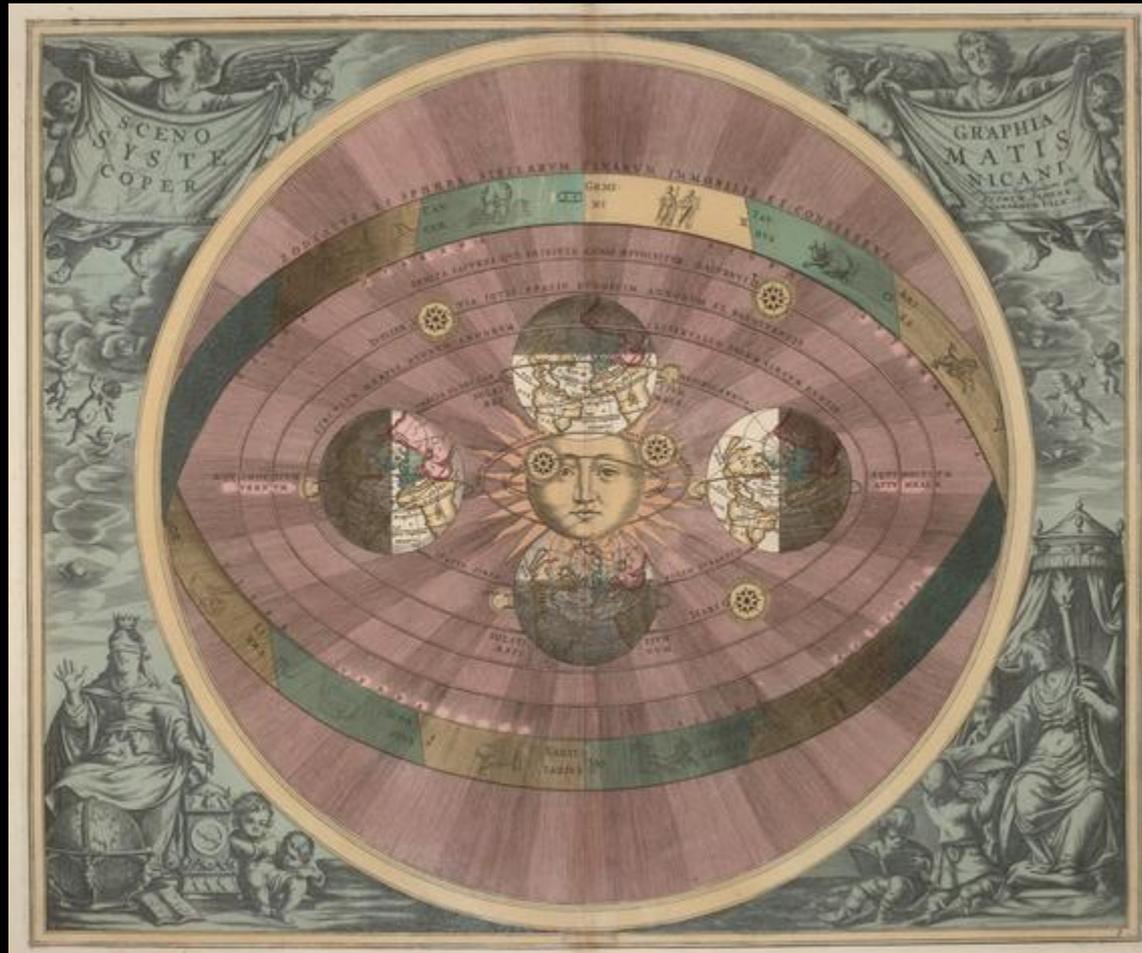
MODELO GEOCÊNTRICO



NICOLAU COPÉRNICO – POLÔNIA-1473-1543



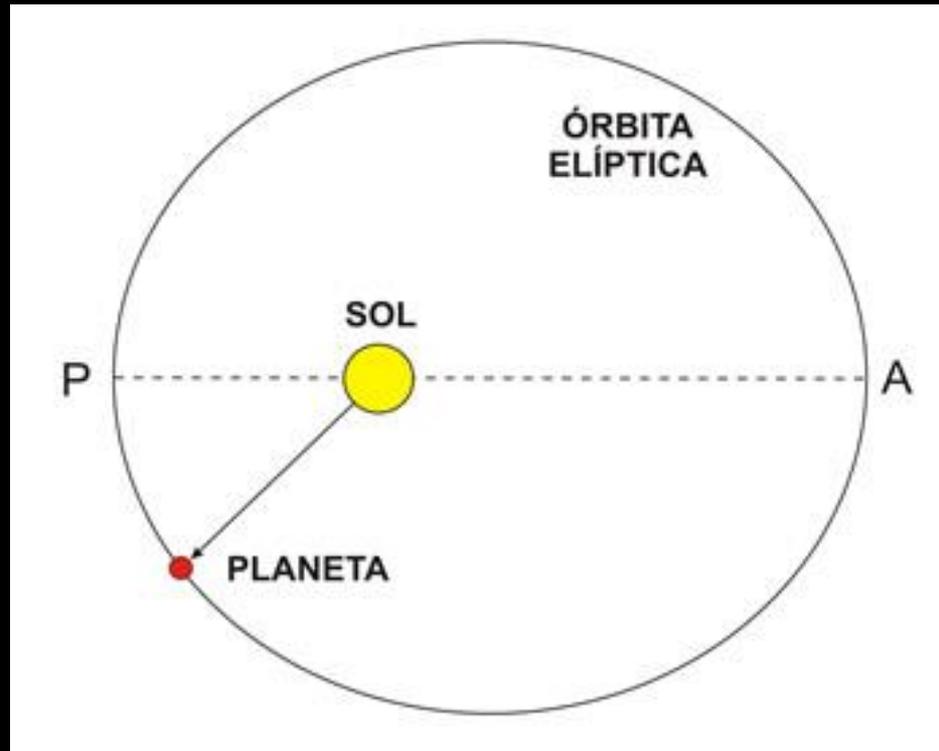
MODELO HELIOCÊNTRICO



JOHANNES KEPLER – ALEMANHA - 1571 - 1630



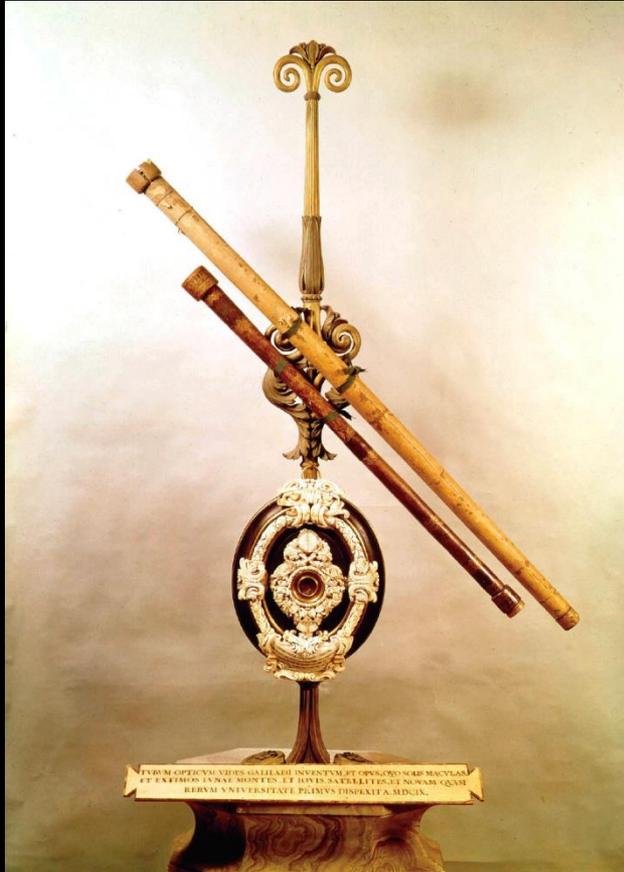
ÓRBITA ELÍPTICA



GALILEU GALILEI – ITÁLIA - 1564 - 1642



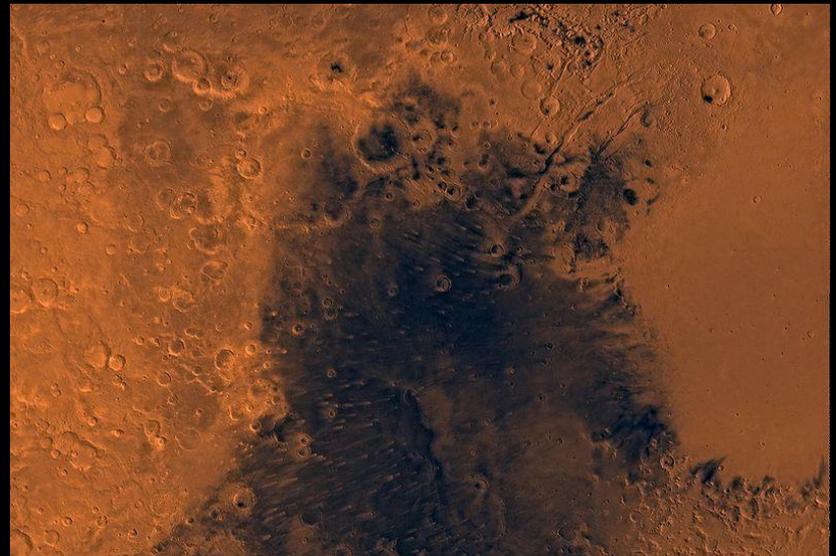
OBSERVAÇÕES COM TELESCÓPIO



LUNETTA DE GALILEU



FORMAÇÕES DE ALBEDO E CALOTAS POLARES

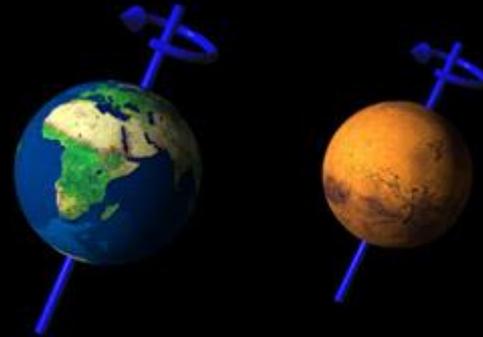


PLANÍCIE SYRTIS MAJOR

OBSERVAÇÕES COM TELESCÓPIO



ROTAÇÃO DE MARTE



Earth
23°

Mars
25°

EIXO INCLINADO



MARTE EM FASE

GIOVANNI SCHIAPARELLI - 1835 - 1910



OBSERVAÇÕES

164.12

VII

19° 25' M
248.94

Carla nelle
l'istmo sopra
pare abbassato
con visibile il
mare come è
il suo abito



in a si vede
un campo di
bianco
(ellade)
in e d'acqua
lente

Il di solito è 7000 nell'ora a 135°

1941

Σ 2548	70° 3'	76' 480	27' 250	20' 15"
59022	70.5	70.40	440	240
37954		172.15		227
969.80		101.73		

Σ 2656 dpl non indetenu Diavolo il compagno è 11.7

1942

Σ 2708	197.6	25' 968	27' 772	20' 35"
147.95	198.1	934	740	95549
532.15				27954
334.25				33503

1943

Σ Sulph	260.75	26' 401	27' 345	20' 30"
	260.79	368	302	67164
				37954
				05102
				20.30
				26.77
				532.15
				671.56

Σ 2734 non inventa. Di San niccolo, caso mio.

Σ 22° 20' 261.32

piccola fitta esattamente nel diametro della calotta

pop. qui di questa	W = 15° 4'	42.15
dpl. dff della par. fitta	16.1	172.15
dal centro della Calotta	26° 120 27' 482	15.75
	001	16.39
		64
		83.90
		57.954
		21.827

Diavolo	75° 733	27' 833	02192
pal	720	327	27954
			40150

22° 40' 267.19

passa al merid. l'istmo dell'Uade, nel quale passate la mezza fitta.

e passa quel punto della costa Adria-
tica dell'Uade, che si trova al centro
del rigo opposto

22 45 268.40

Passo dell'Uade merid. del Timon
e dell'Adria merid. W = 375° 2'

376.00	326.8
532.15	
206.15	

22° 50' 269.62

Passo dell'Uade infiore W = 30° 2'

30.00	1.0
532.15	1.5
206.15	0.5

22° 57' 270.11

Passo della calotta W = 16° 2'

16.0	1.10
	172.15
	150.15

MARES, CONTINENTES E CANAIS DE MARTE

Atti de' Lincei Mem. Cl. sc. fis. mat. Serie 5^a Vol. II.

Schiaparelli - Osservazioni su Marte Tav. II.



1884 Marzo 14
lat - 22°



1884 febbrajo 4
lat - 24°



1884 Marzo 9
lat - 71°

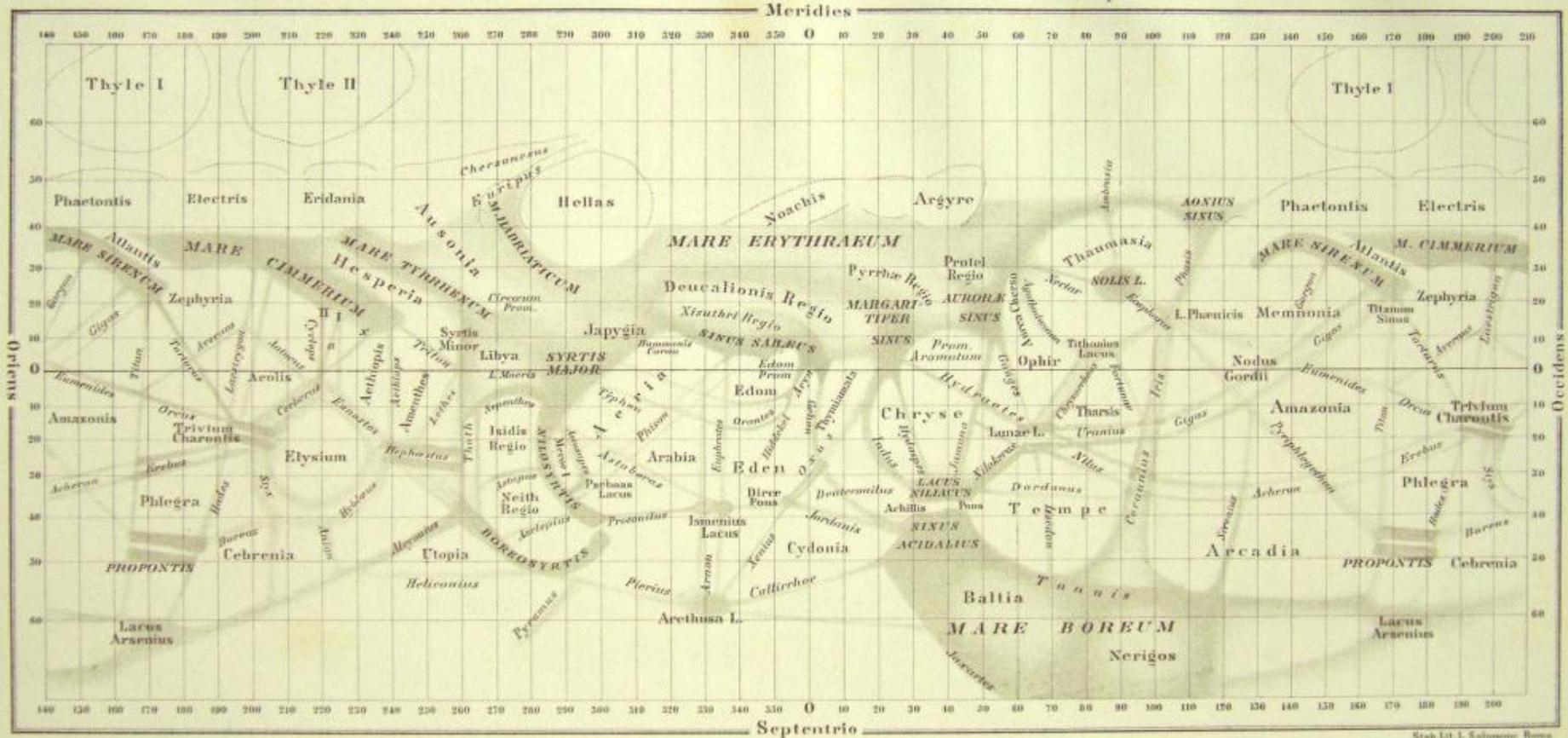


1884 Gennajo 25
lat - 130°

MAPA DE MARTE

Atti de' Lincei - Mem. Cl. sc. fis. ecc. Serie 5^a Vol. II.

Schiaparelli - Osservazioni su Marte. Tav. I.



Stab. Lit. L. Salomonson - Roma

MARS 1883-84.

EUGÈNE M. ANTONIADI – GRÉCIA/FRANÇA - 1870 – 1944



Mars Dust Storm
Hubble Space Telescope

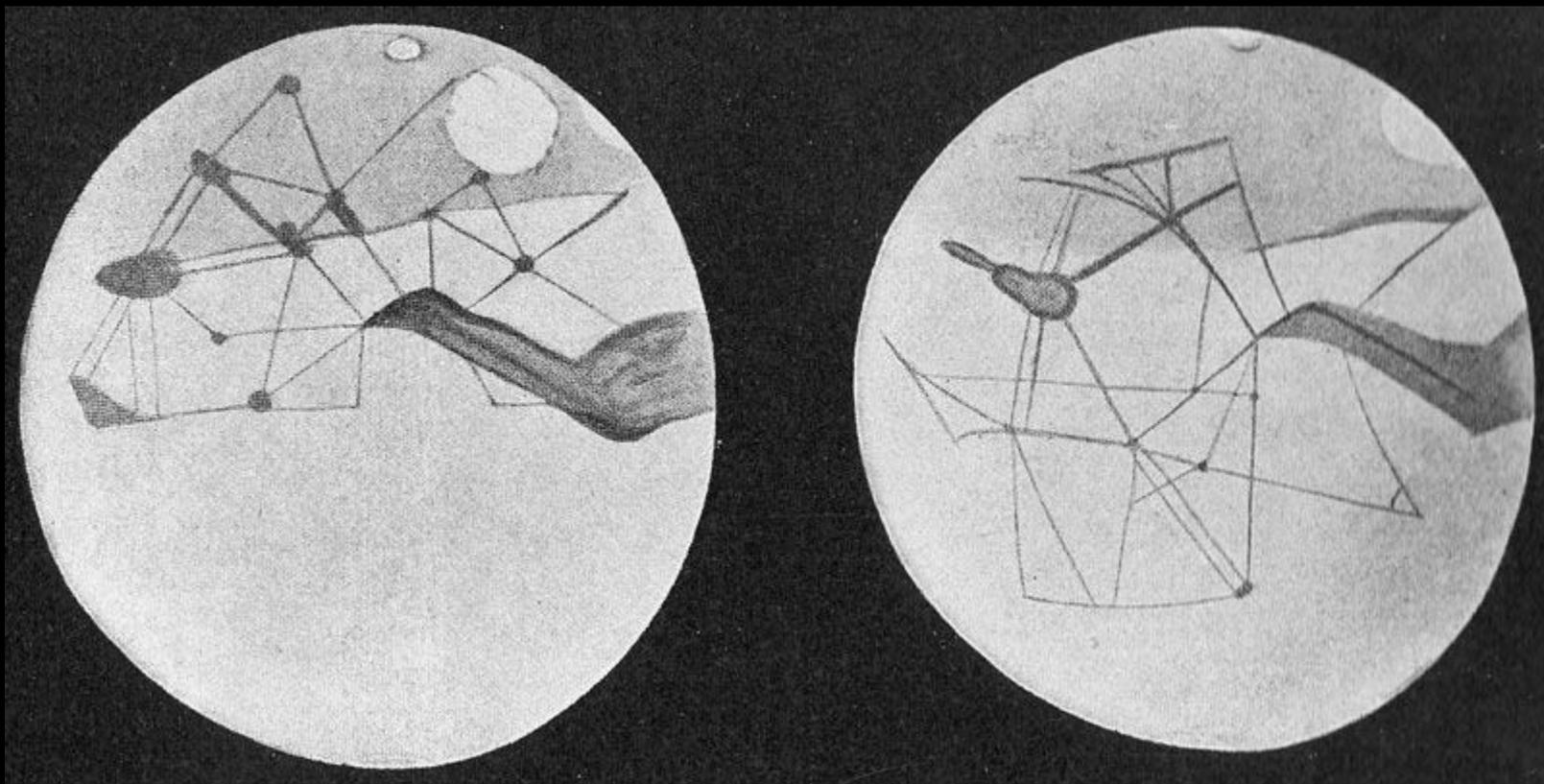


TEMPESTADES DE
AREIA EM MARTE

PERCIVAL LOWELL - 1855 - 1916



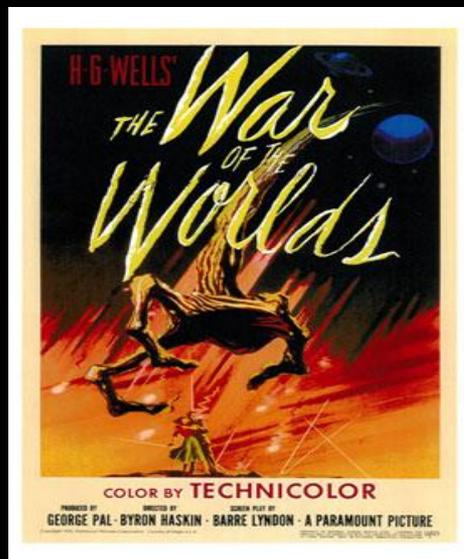
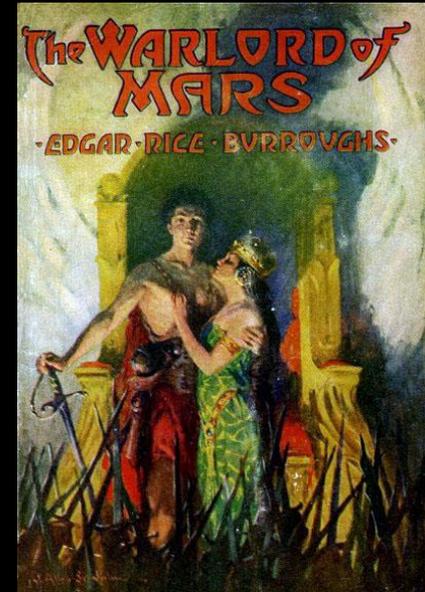
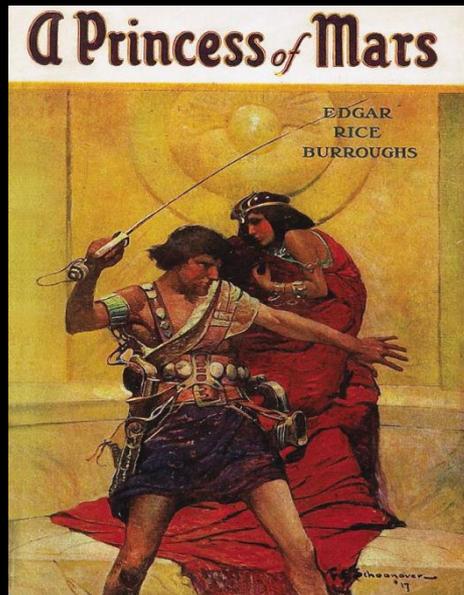
CANAIS DE MARTE



VIDA EM MARTE?



CULTURA POPULAR

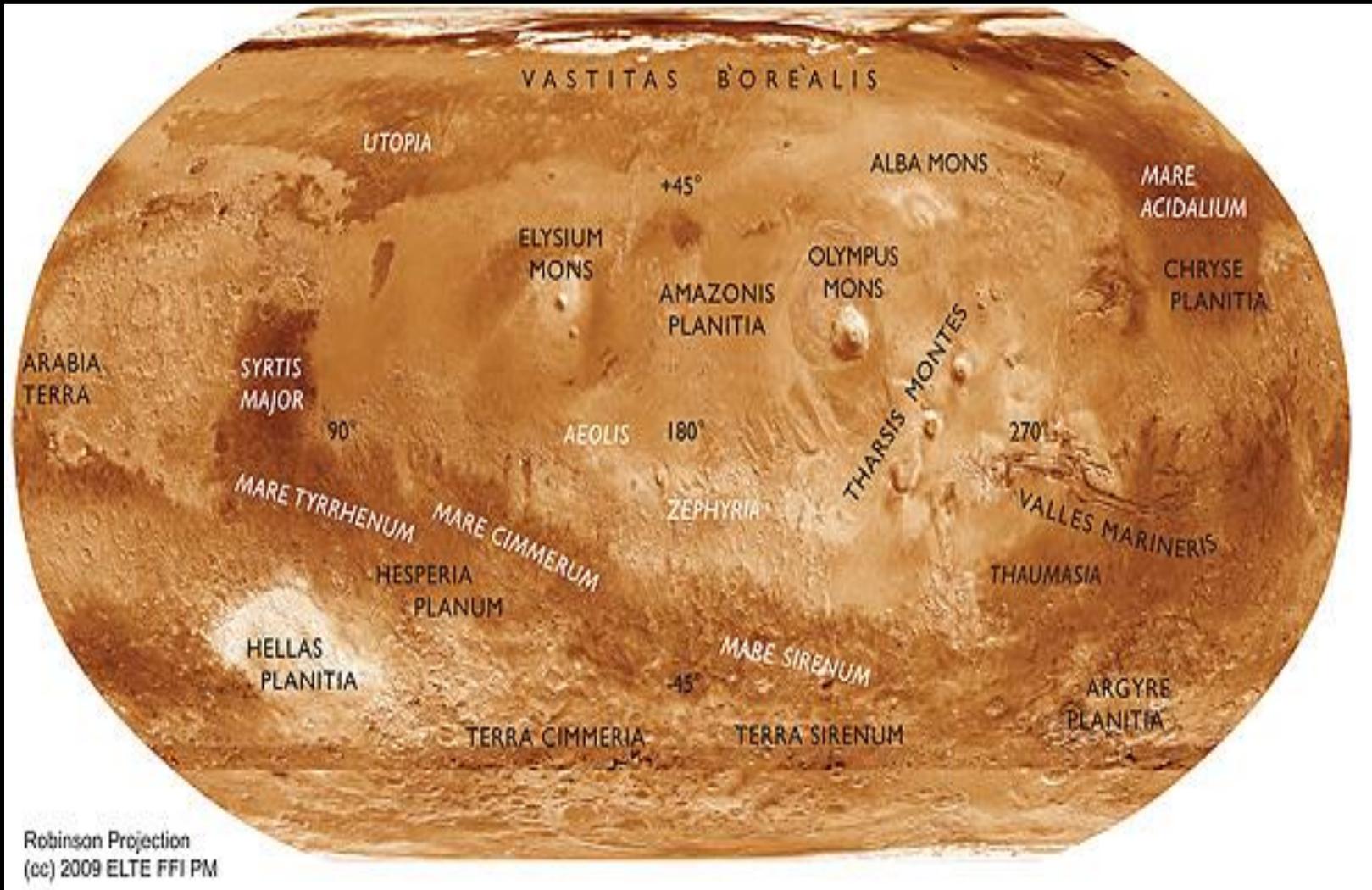


GERARD P. KUIPER - HOLANDA/MÉXICO
1905 - 1973

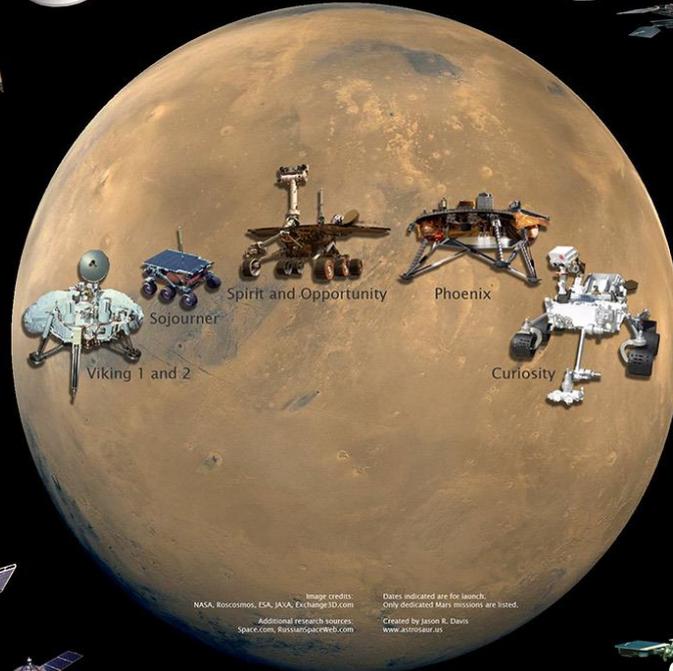


FINA CAMADA DE CO₂ NA
ATMOSFERA

DIVISÃO DAS FORMAÇÕES DE ALBEDO SEGUNDO A UNIÃO INTERNACIONAL DE ASTRONOMIA EM 1960



Mars Exploration Family Portrait



40: Mars Science Laboratory Curiosity
November 26, 2011
Mission to Gale Crater

39: Phobos-Grunt
November 8, 2011
Stranded in Earth orbit

1, 2: MARS 1M No. 1 / MARS 1M No. 2
October 10 / October 14, 1960
Both destroyed during launch

38: Phoenix
August 4, 2007
Landed, dug for water

3, 4, 5, 8: MARS 2MV-4 No. 1 / Mars 1 / Mars 2MV-3 No. 1 / Zond 2
October 24 / November 1 / November 4, 1962 / November 30, 1964
Broke up in Earth orbit / Radio failure en route / Stranded in Earth orbit / Radio failure en route

37: Mars Reconnaissance Orbiter
August 12, 2005
Orbiting Mars

6, 7: Mariner 3 / Mariner 4
November 5 / November 28, 1964
Payload fairing failed to open / First flyby and picture return

35, 36: Mars Exploration Rovers Spirit and Opportunity
June 10 / July 7, 2003
Both landed on surface, Opportunity still in operation

9, 10: Mariner 6 / Mariner 7
February 25 / March 27, 1969
Both flew by, returned pictures

esa 34: Mars Express / Beagle 2 lander
June 2, 2003
Orbiting Mars, Beagle lost after separation

11, 12: Mars 1969 A / Mars 1969 B
March 27 / April 2, 1969
Both destroyed during launch

33: Mars Odyssey
March 7, 2001
Orbiting Mars

13, 17: Mariner 8 / Mariner 9
May 8 / May 30, 1971
Destroyed during launch / First probe to orbit Mars

32: Mars Polar Lander
January 3, 1999
Crashed on surface

14, 15, 16: Cosmos 419 / Mars 2 / Mars 3
May 10 / May 19 / May 28, 1971
Failed in Earth orbit / Lander crashed / Lander failed

31: Mars Climate Orbiter
December 11, 1998
Crashed due to imperial/metric unit mixup

18, 19, 20, 21: Mars 4 / Mars 5 / Mars 6 / Mars 7
July 21 / July 25 / August 5 / August 9, 1973
Missed planet / Orbed planet / Lander failed (6 and 7)

30: Nozomi
July 4, 1998
Missed planet

22, 23: Viking 1 / Viking 2
August 20 / September 9, 1975
Both landed on surface, returned data

29: Mars Pathfinder
December 4, 1996
Landed on surface, deployed Sojourner rover

24, 25: Phobos 1 / Phobos 2
July 7 / July 12, 1988
Lost communication en route / Lost communication near Phobos

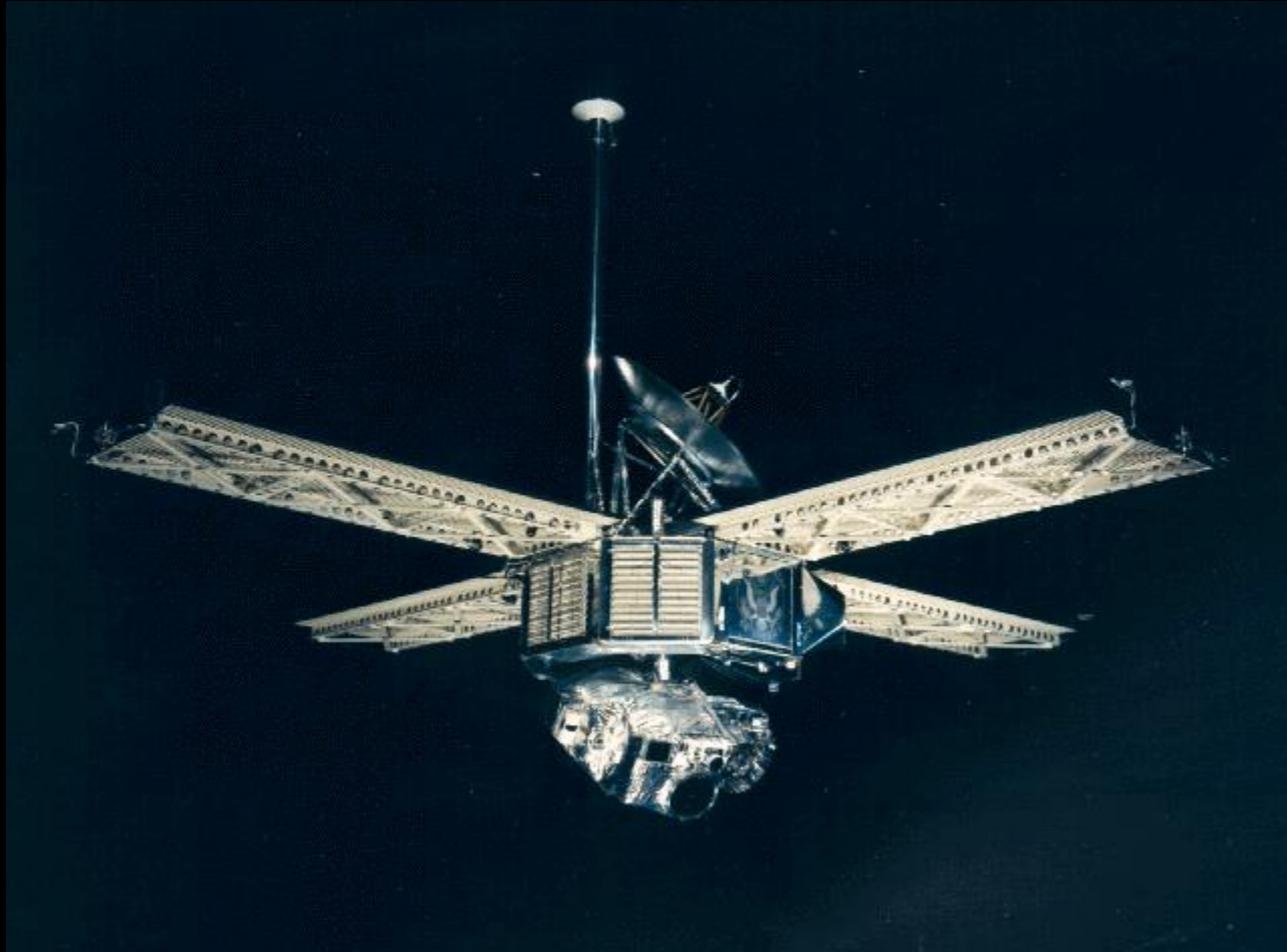
28: Mars 96
November 16, 1996
Destroyed during launch

26: Mars Observer
September 25, 1992
Lost communication near Mars

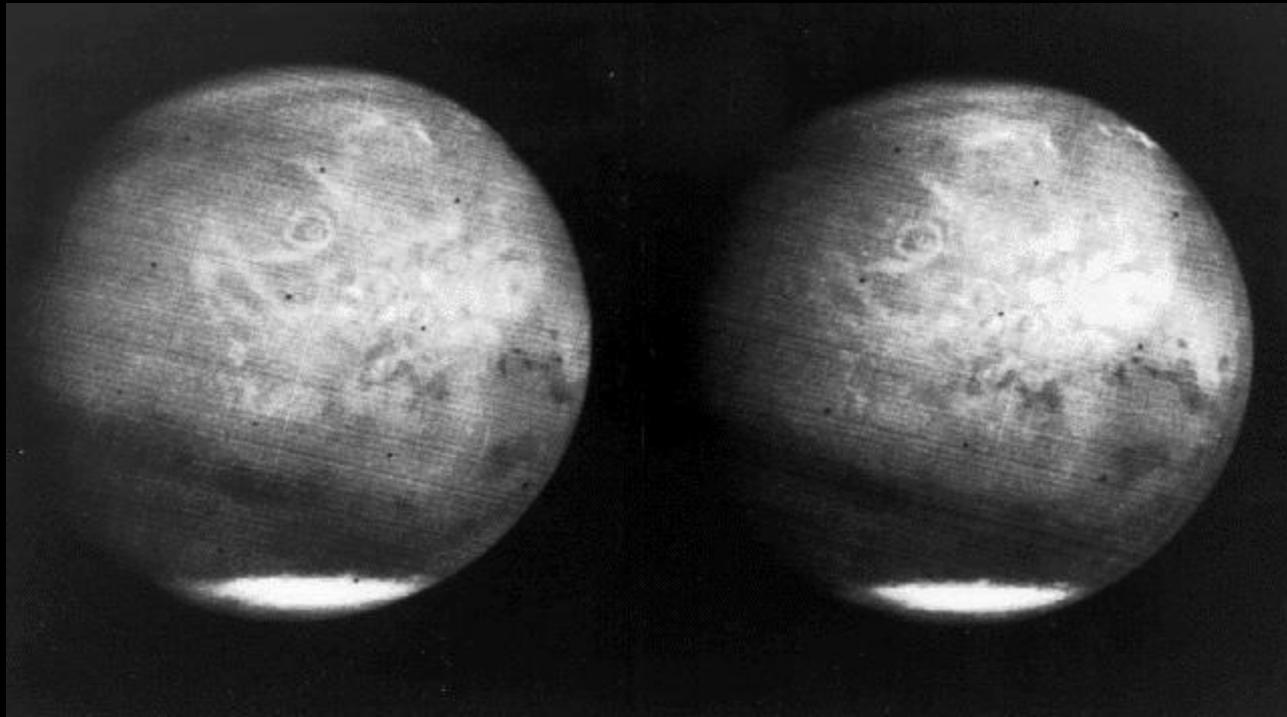
27: Mars Global Surveyor
November 7, 1996
Orbited and returned data

Image credits: NASA, Roscosmos, ESA, JAXA, Exchange3D.com
Additional research sources: Space.com, RussianSpaceWeb.com
Dates dedicated are for launch. Only dedicated Mars missions are listed.
Created by Jason R. Davis
www.acrospace.us

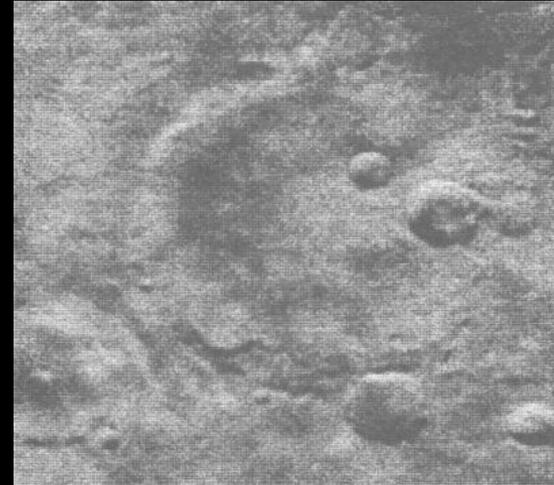
U.S. MARINER, MARS
(NASA) DÉCADAS DE
60 E 70



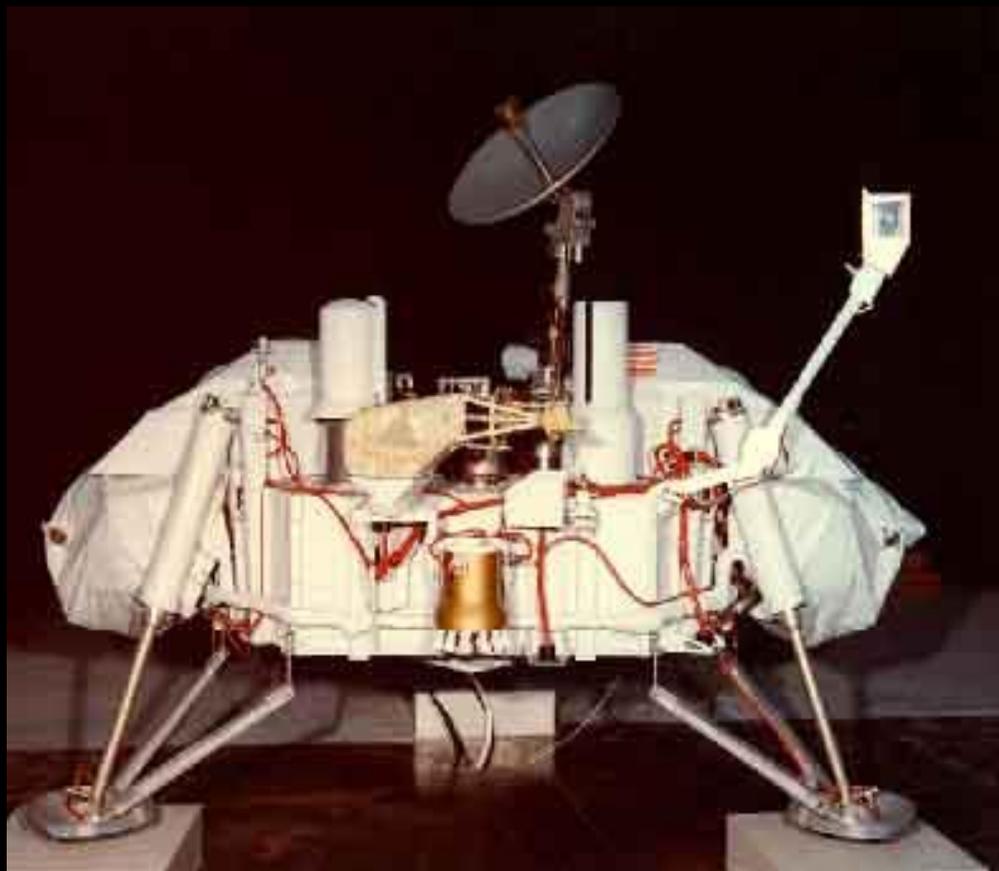
PRIMEIRAS IMAGENS DE MARTE OBTIDAS DO ESPAÇO



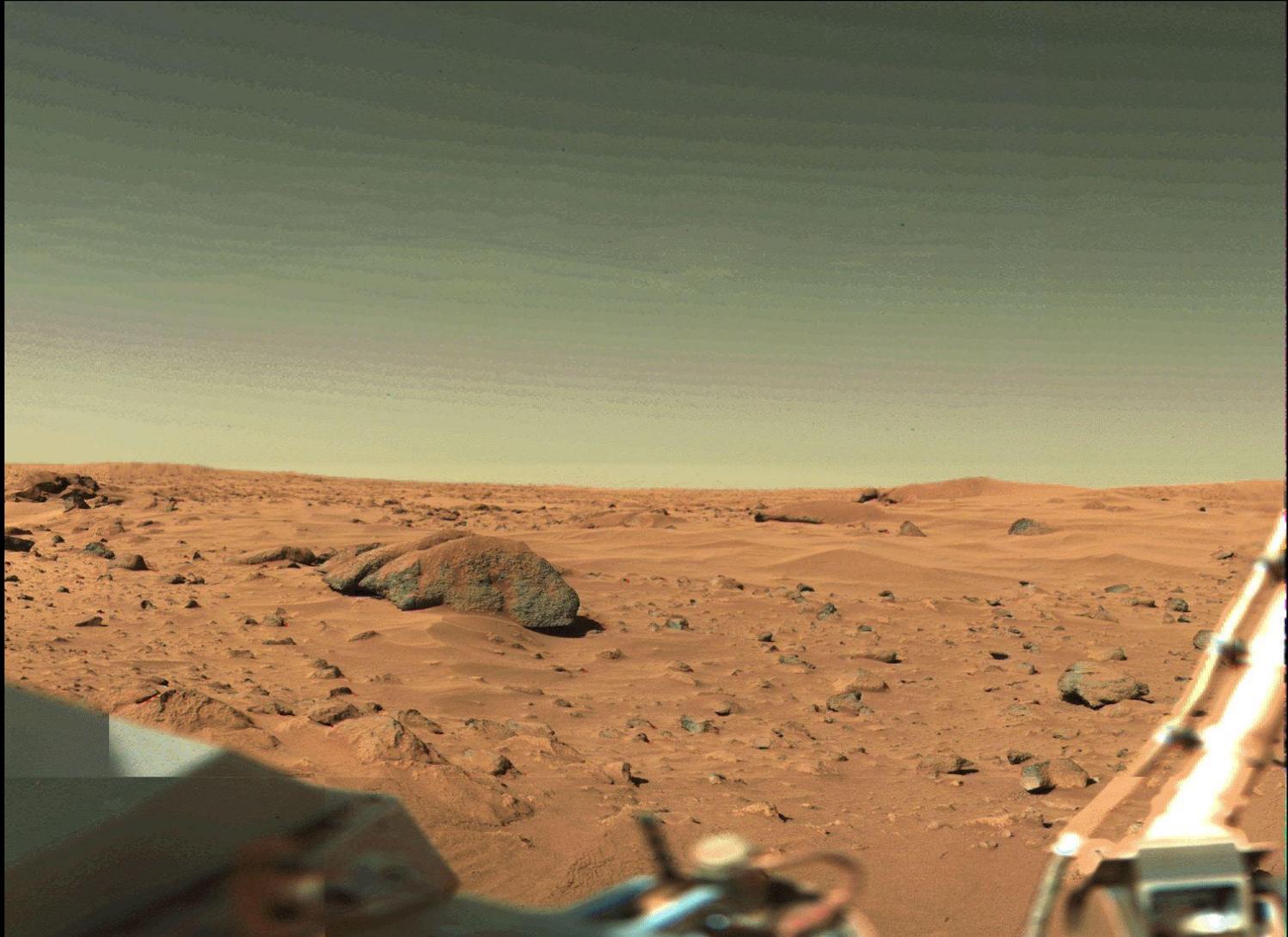
PRIMEIROS DETALHES DA SUPERFÍCIE



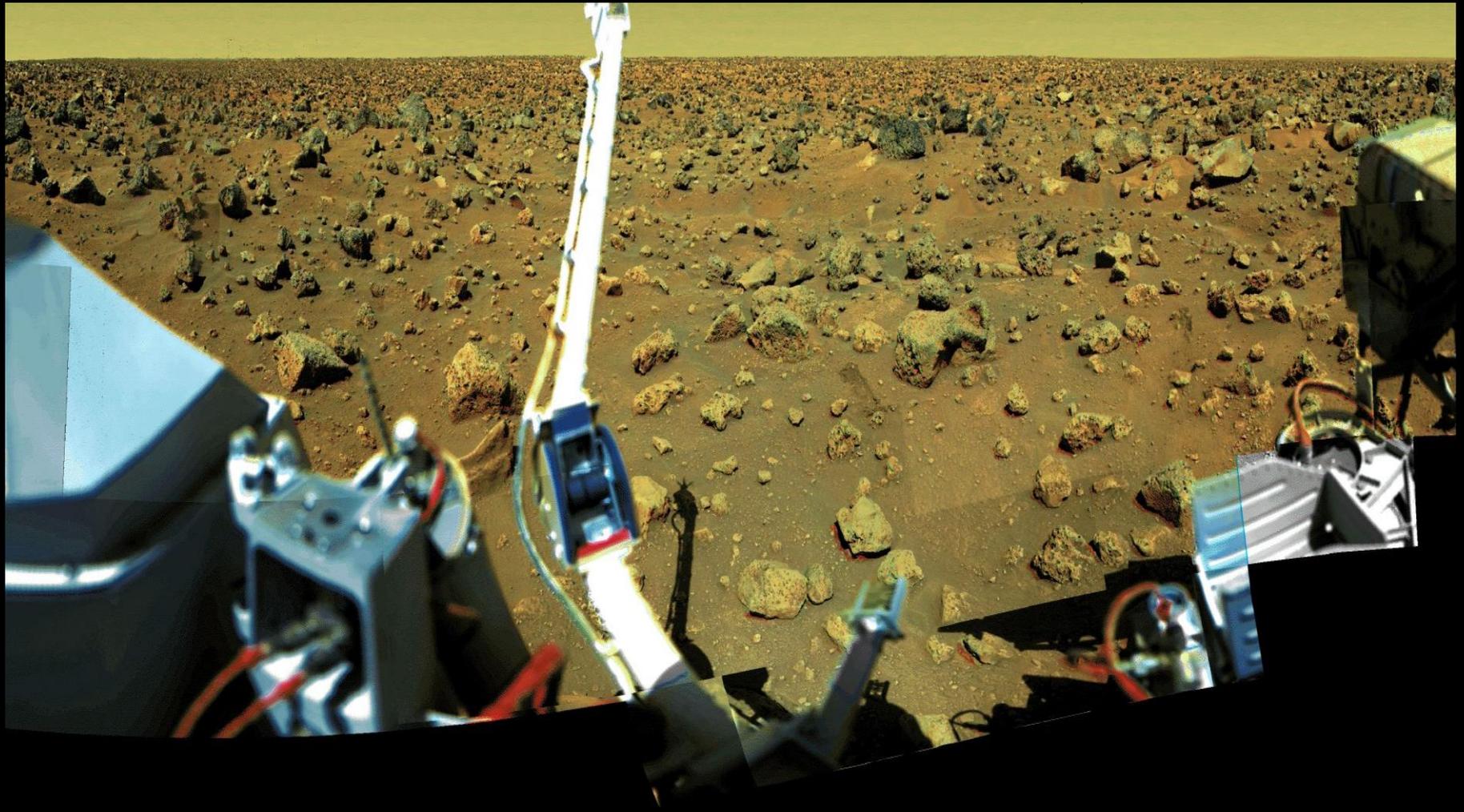
VIKING 1 E 2- DÉCADA DE 70



SUPERFÍCIE DE MARTE



SUPERFÍCIE DE MARTE



DÚVIDAS

?

CONTATO: ROBSON.EGEA@GMAIL.COM

FIM!