

DISCUSSION OF ADAPTABILITY IN ASTRONOMY TEACHING – AGED LEARNERS IN A COMMUNITY COLLEGE WITH 3D AND VR

Taipei Astronomical Museum
Research Assistant

洪景川 Jim Ching-Chuan Hung

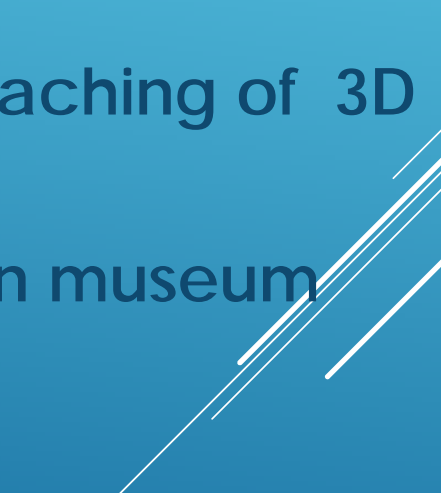
APRIM 2017 14:30 S7-6-3
TICC 201F, TAIPEI
Public Education ,Outreach & Diversity



2017 Asia-Pacific Regional IAU Meeting
3-7 July 2017 TAIPEI, TAIWAN
Venue: Taipei International Convention Center




Overview

1. Motivation
 2. Teaching aids and materials
 3. Community College-Examples of Astronomy Teaching of 3D and VR Astronomy
 4. Community College aged students served as an museum volunteer worker
 5. Conclusions
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SUMMARY


- ▶ Aging society has come, elderly people involved in lifelong learning is the necessary process of successful “Active Aging”.

- ▶ Because of their physical, psychological and social factors, the content and the curriculum design and the implementation, has their particularity and is different from the general adult education or school education.

- ▶ Arrangements for the elderly and the teaching environment has to be adapted and adjusted in many aspect.
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The purpose of this study is to explore the learning problems of **ACTIVE AGING LEARNERS**,

This paper aims to develop and review the teaching objectives of the two age-oriented learners of community colleges in Taipei City, which are currently offering **Astronomical Observation Courses**.

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「YOU CAN'T TEACH AN OLD DOG NEW TRICKS?」



127 YR-OLD (136Yr) 29cm old refractor in SYDNEY OBSERVATORY
[1874 BUILT , 1883 ON THE PLATE]
Still works!!
(The oldest telescope in Australia in regular use)

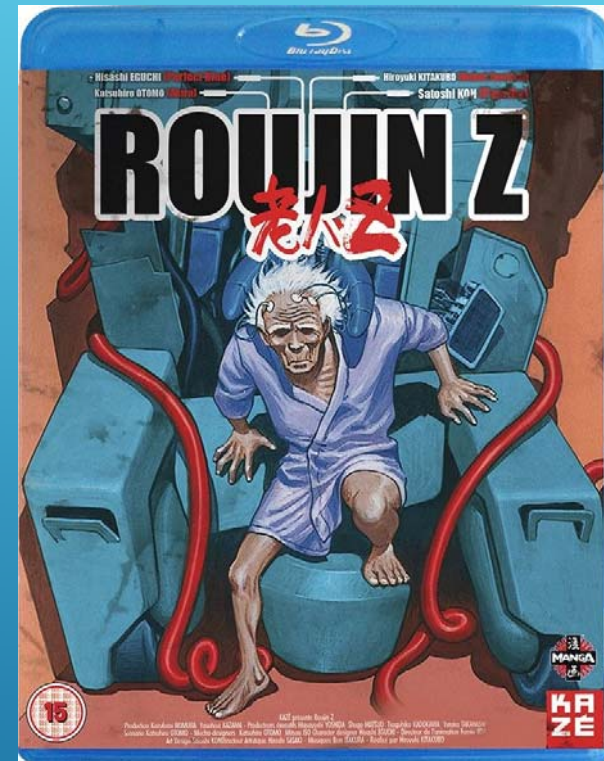
— 、 MOTIVATION :


- ▶ In order to promote the education of the elderly, the Ministry of Education, in conjunction with schools, institutions and civil society at all levels, HAVE BEEN WORKING together to build the "Community College" and "Elderly Learning Center".
- ▶ In addition, authorities have set up "Evergreen Academy" and "Elderly College" in the University to create a diversified lifelong learning channel with citizens aged 55 to 65 as the main ethnic group.

- ▶ Lerling "HappyElderly" means "happy learning, joyful and forgetting age", and also meet with Confucius "Excited, happy to forget hungry, I do not know my life have come to the old age.
- ▶ After several years of promotion, Lerling "HappyElderly" has become Taiwan's general education system to promote in the society, and to promote the education policy of the elderly.




- ▶ **Lerling** "HappyElderly" pronounced similar to the pronunciation of the English word Learning,
- ▶ Also to encourage domestic elders live to the old and also to learn lifelong as their learning spirit.



- ▶ The term **ACTIVE ELDERLY** "Chuangling" - comes from Japan, and "the age of creation" represents a spirit of age that is totally an unrestricted, positive thinking of life,
 - ▶ and continues to create dreams , chasing dreams and create a challenging second life.
- 
- A decorative graphic consisting of several parallel white lines of varying lengths, slanted diagonally from the bottom right towards the top right, set against the blue background.

- ▶ The main purpose of education or training for elderly people is :
- ▶ To forge the physical and mental health,
- ▶ To delay aging,
- ▶ To save the national medical resources,
- ▶ Be happy to live in old age

- ▶ Capable elderly people will and have been join Taipei Museum as volunteers to keep carrying on contributing to the community or engaged in paid work.
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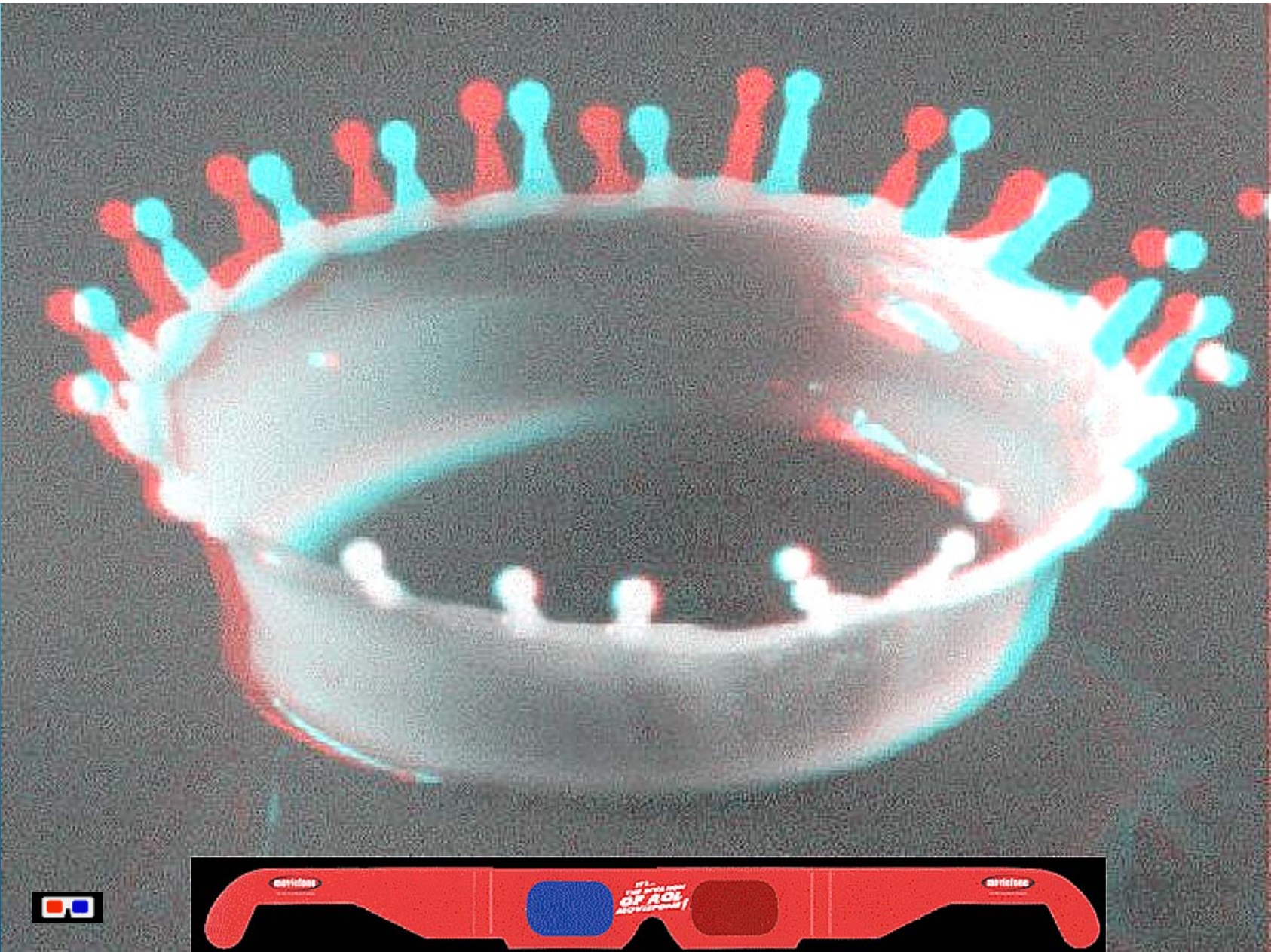
- ▶ The elderly with higher economic ability can take astronomical star watching as hobby and entertainment during career planning spindle after retired from work.

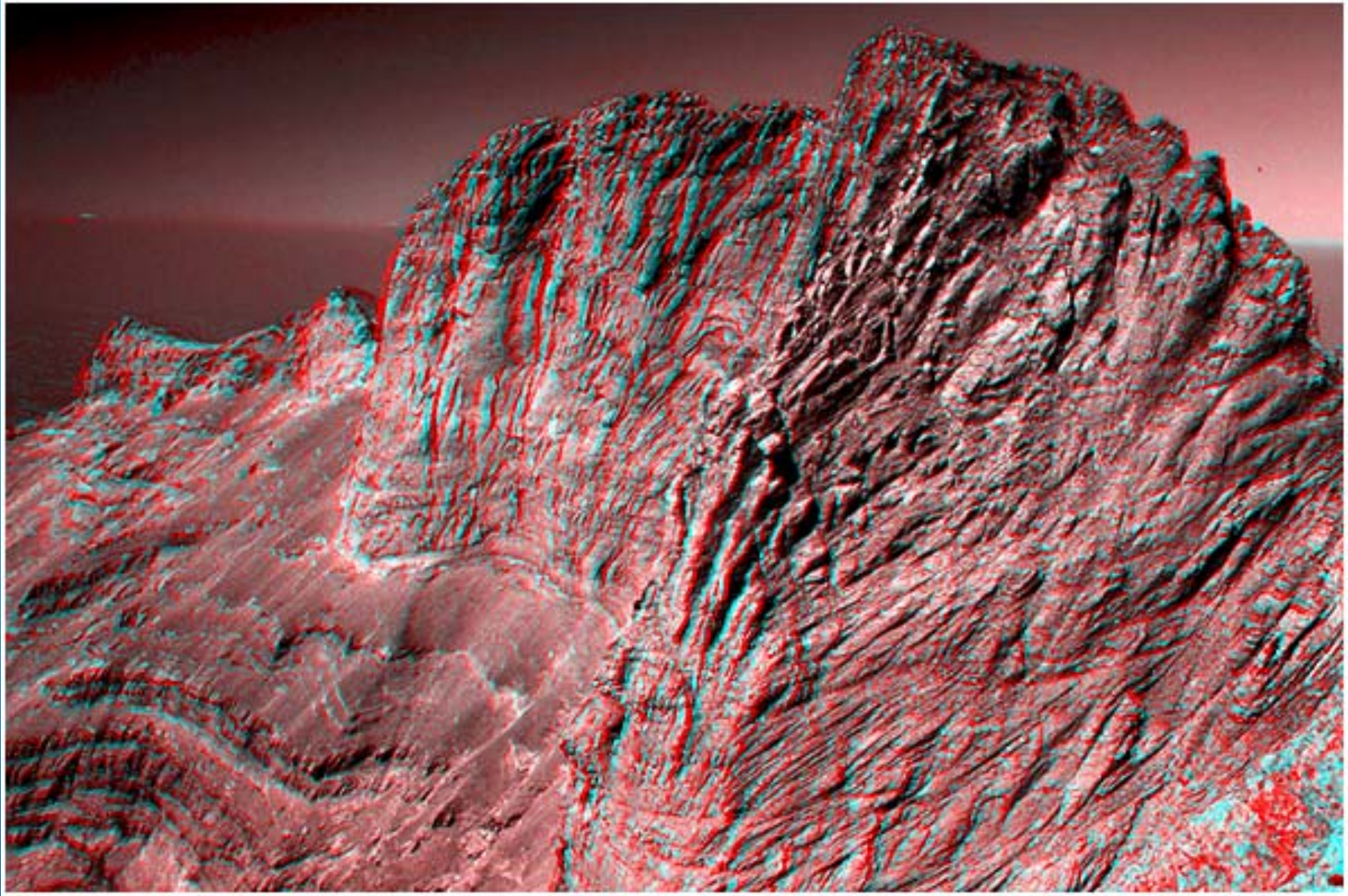
TOOLS AND EQUIPS APPLIED :

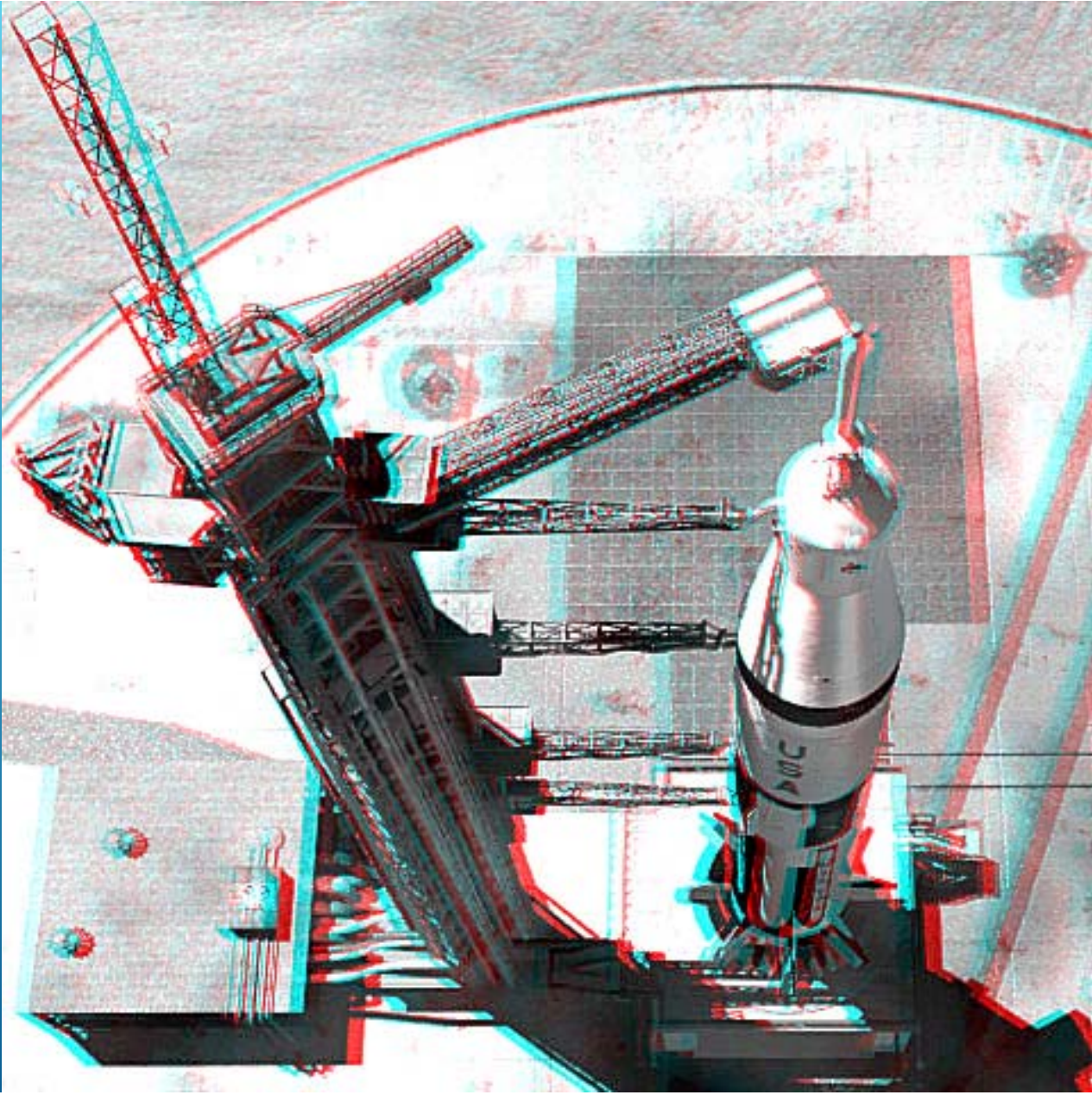


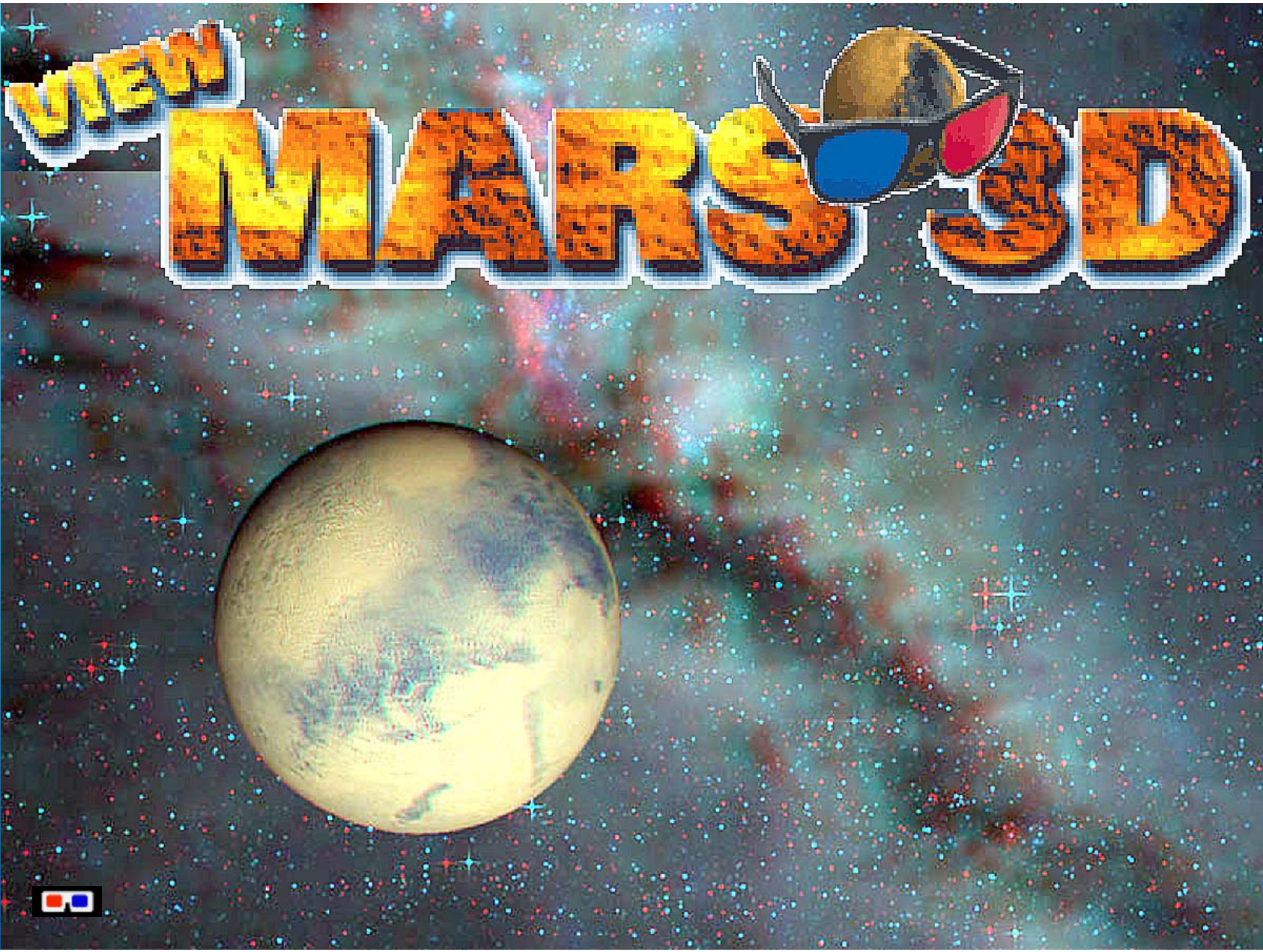
Why not ANAGLYPH?!







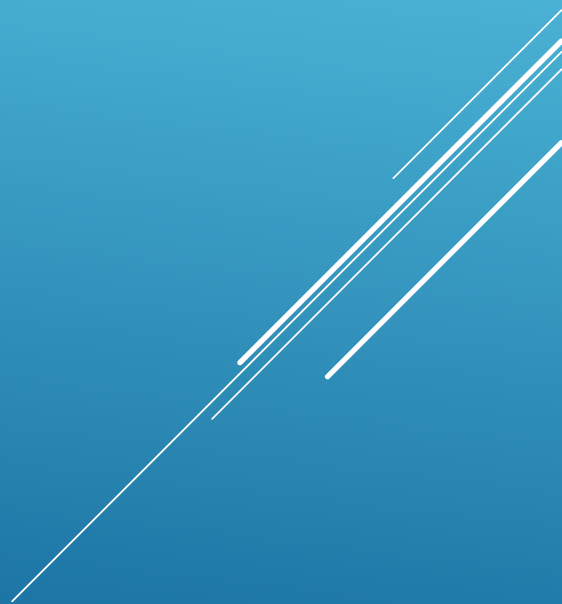
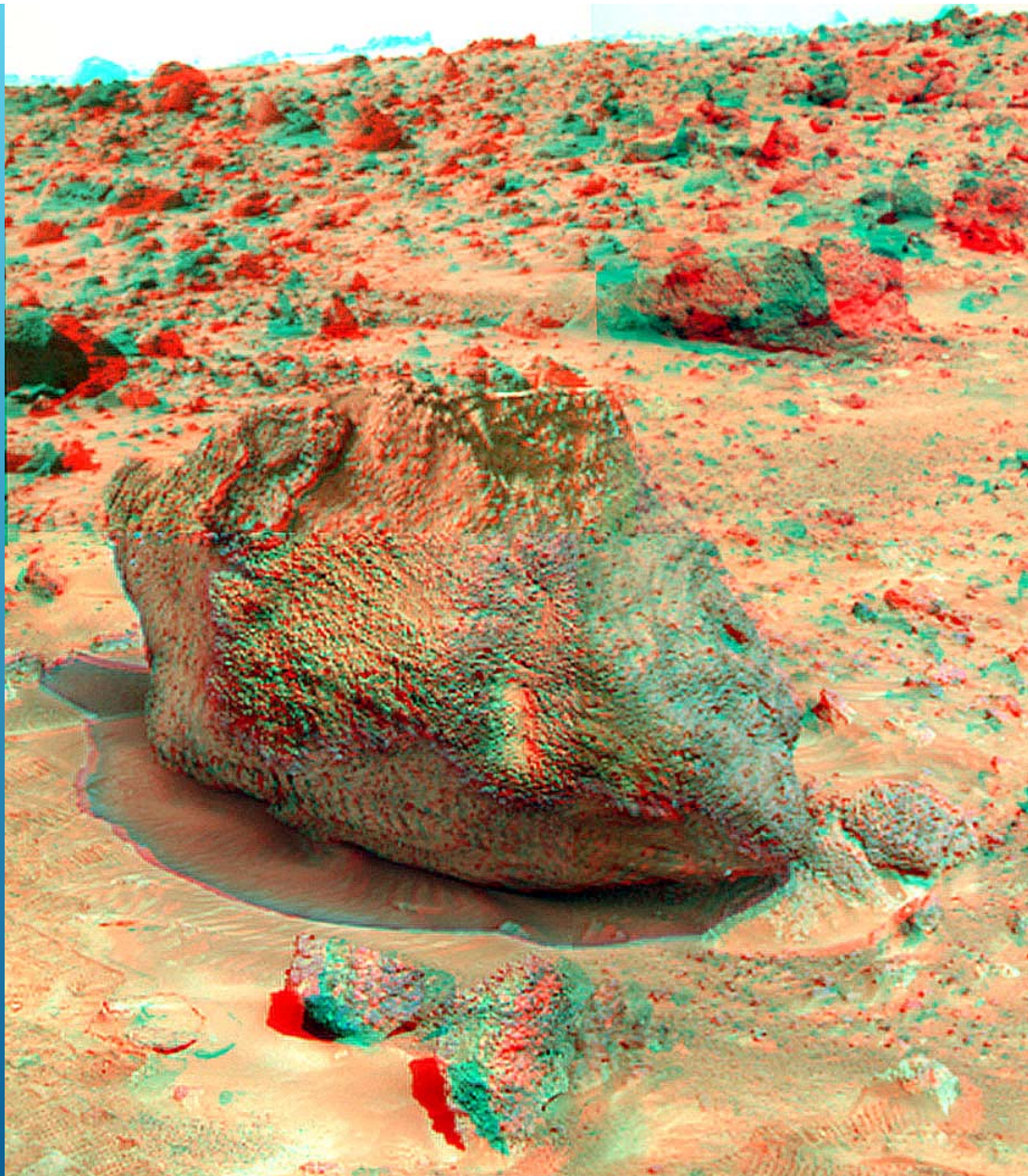


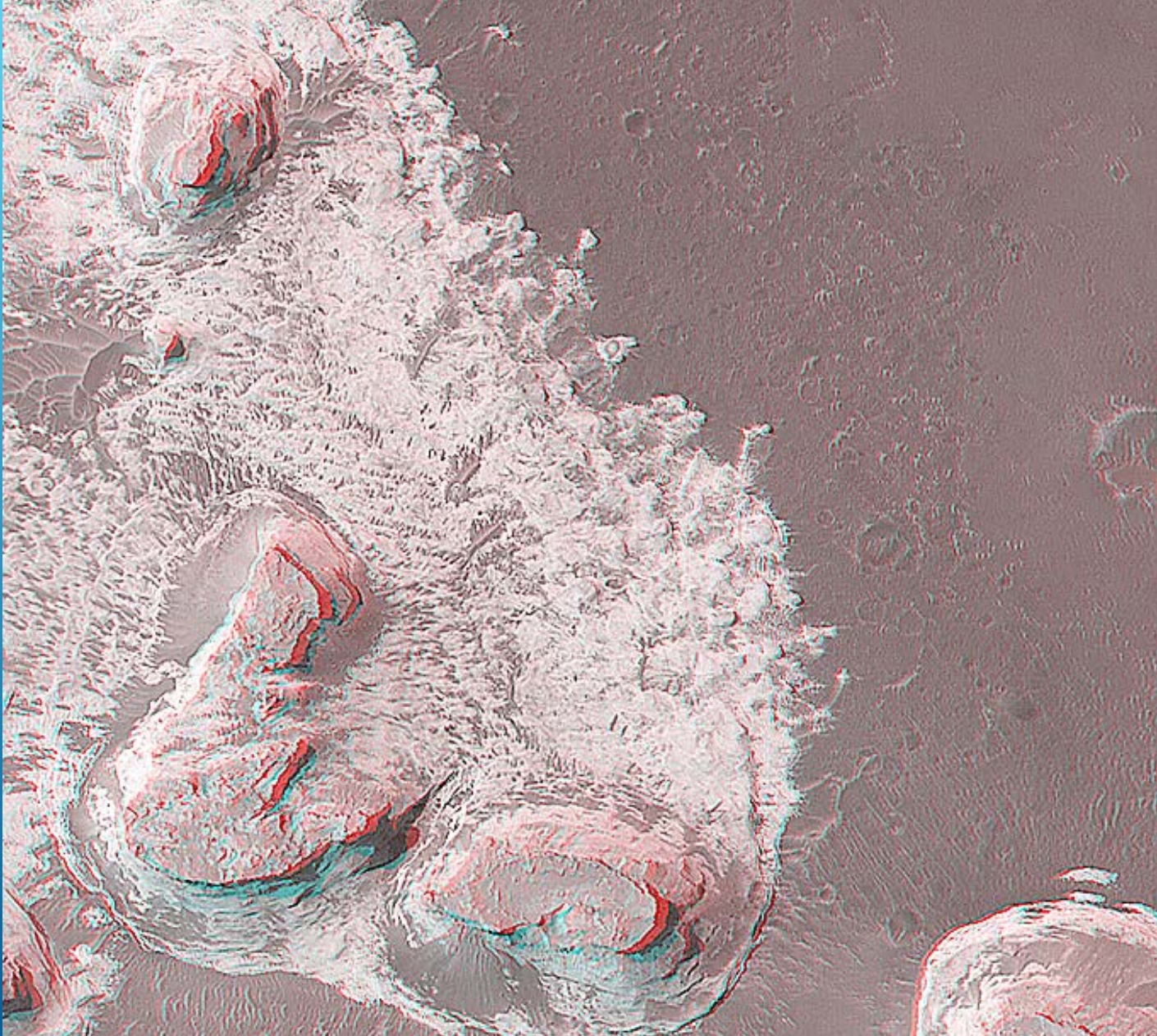


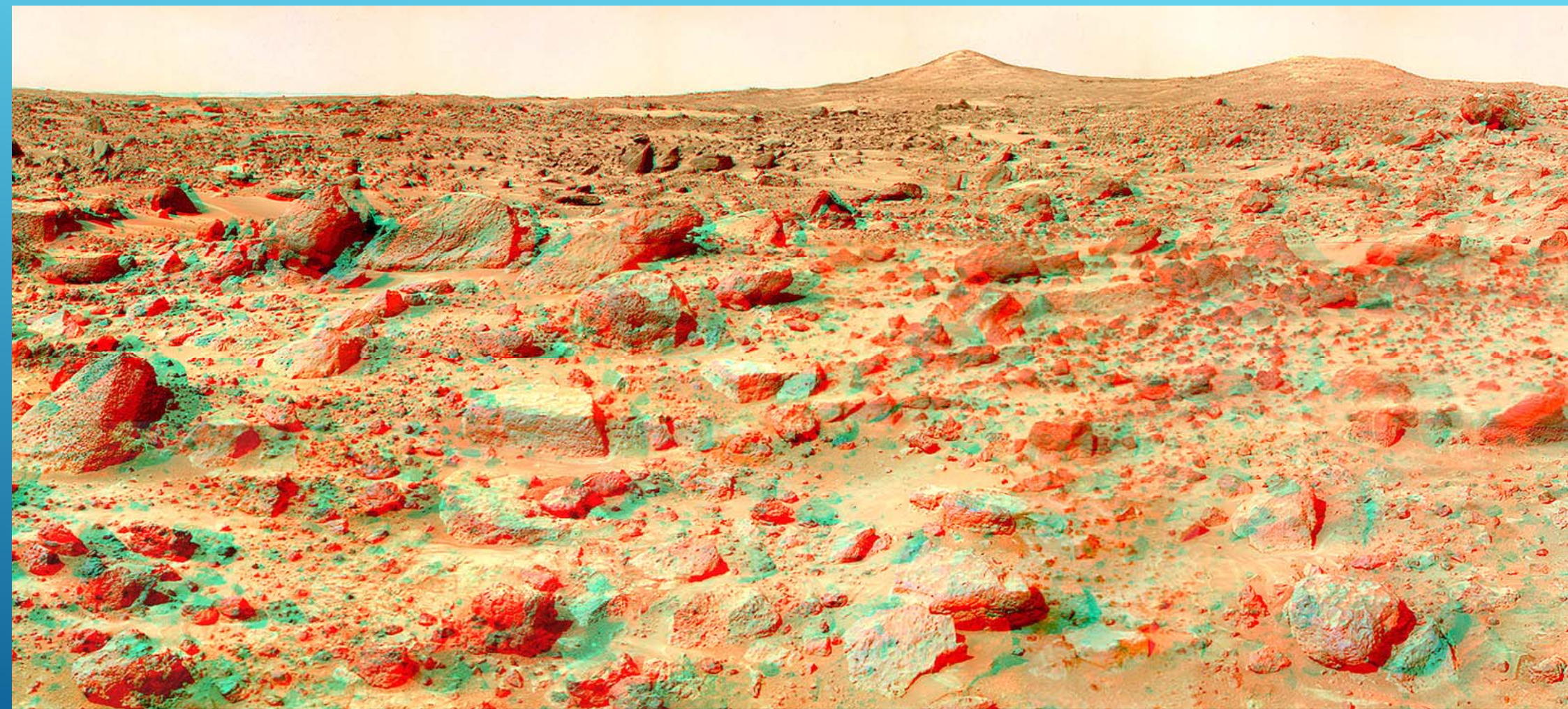
VIEW

MARS







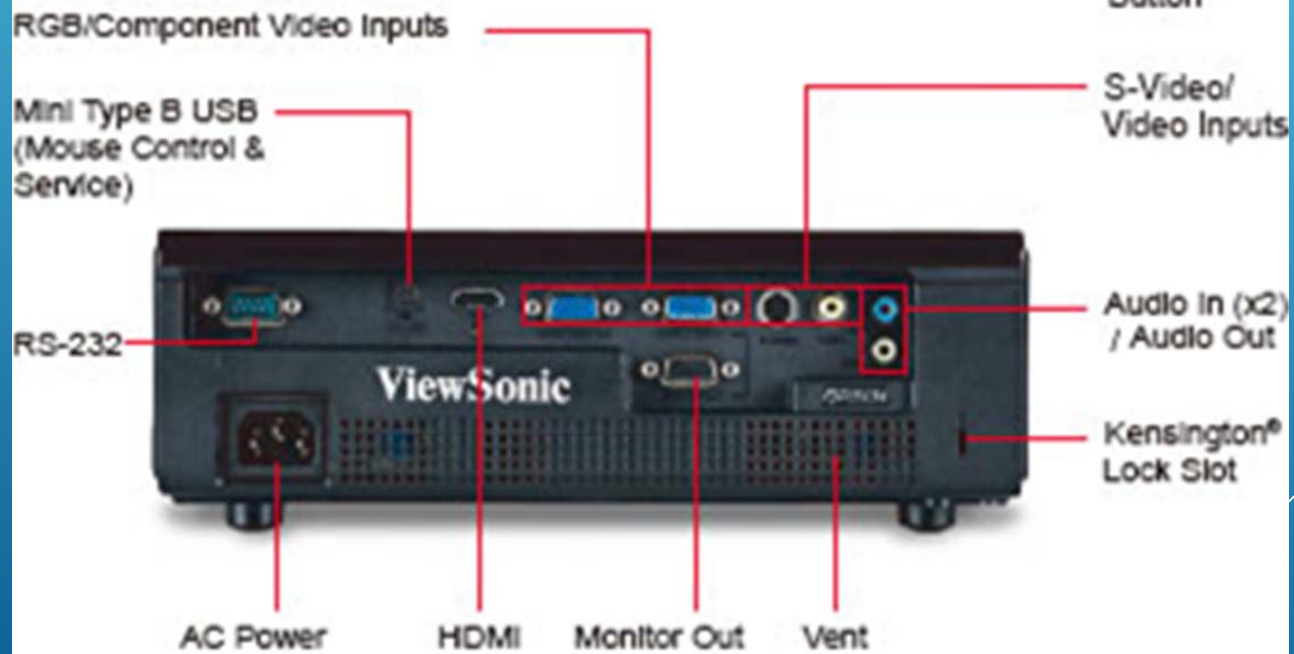


TOOLS AND EQUIPS APPLIED :

▶ 1. Viewsonic PJD5134 3D DLP PROJECTORS (3000ANSI)



品牌	ViewSonic優派
型號	PJD5134
類型	3D
顏色	黑色系
產地	其他
尺寸(長x寬x高)(cm)	268mm (寬) x 84.4mm (高) x 221mm (深)
投影畫面尺寸	24 - 21.2 吋
投影高度(lm)	3000 流明
對比	15,000:1
投射比例	其他
投射距離	1.0 - 8.0 公尺
畫面比例	長寬比例 4:3 / 16:9
支援解析度	800x600
產品型號	PJD5134



2. HI-SHOCK主動快門式 3D眼鏡 (YDD3PG)



規格/ SPECIFICATION

產品名稱：DLP快門式3D眼鏡 YDD3PG

重量：32g

有效距離：10米

鏡架材質：環保塑膠

鏡片材質：1.5mm LCD液晶

工作時間：可持續工作30小時

同步方式：DLP-Link

尺寸/ SIZE

標準尺寸
適合大部分人群



眼鏡總寬度

156MM



鏡片寬度

65MM



鏡片高度

38MM



鼻梁寬度

15MM

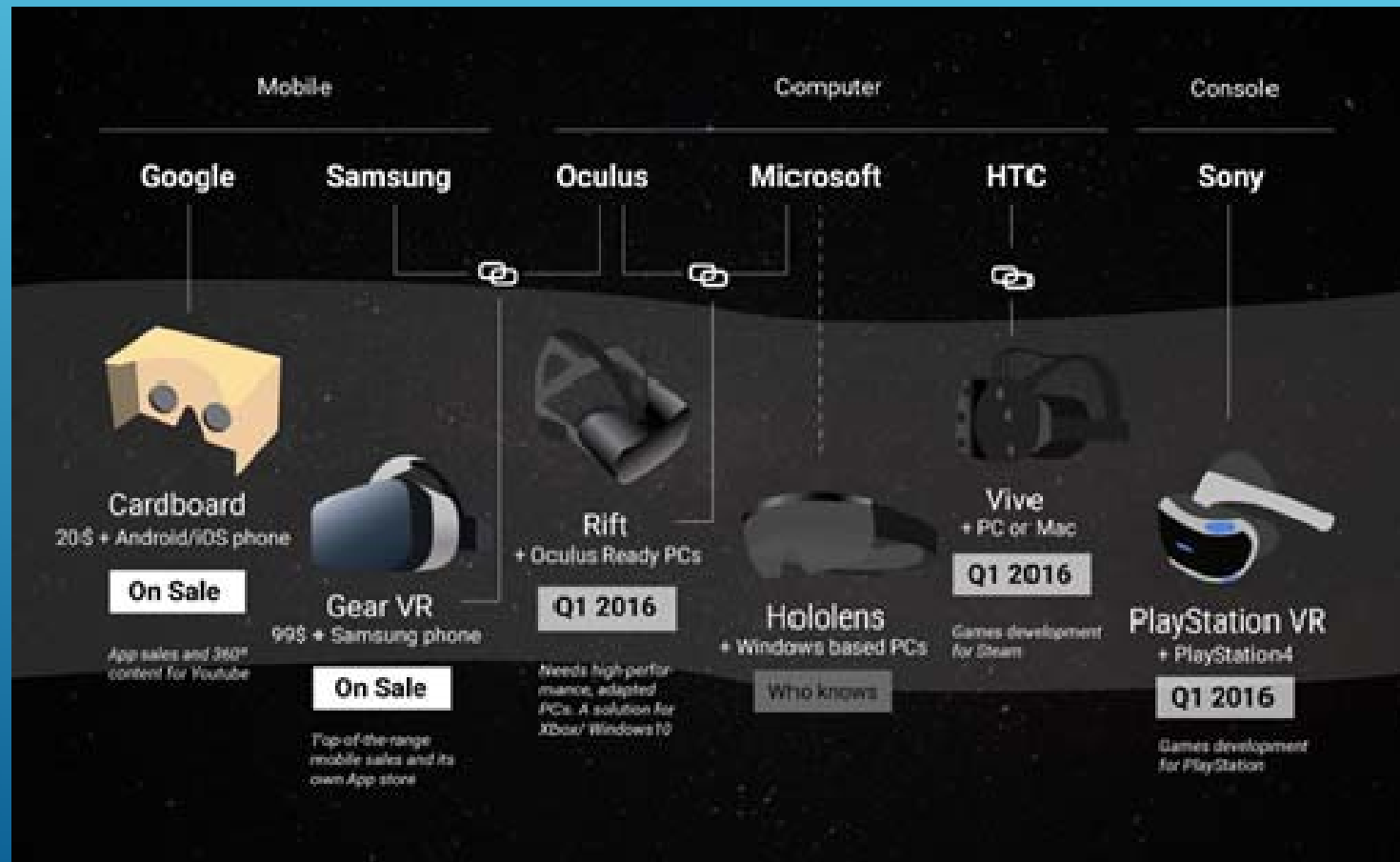


鏡腿長度

135MM

HI-SHOCK ACTIVE SHUTTER 3D GLASSES

3. VR GOGGLE



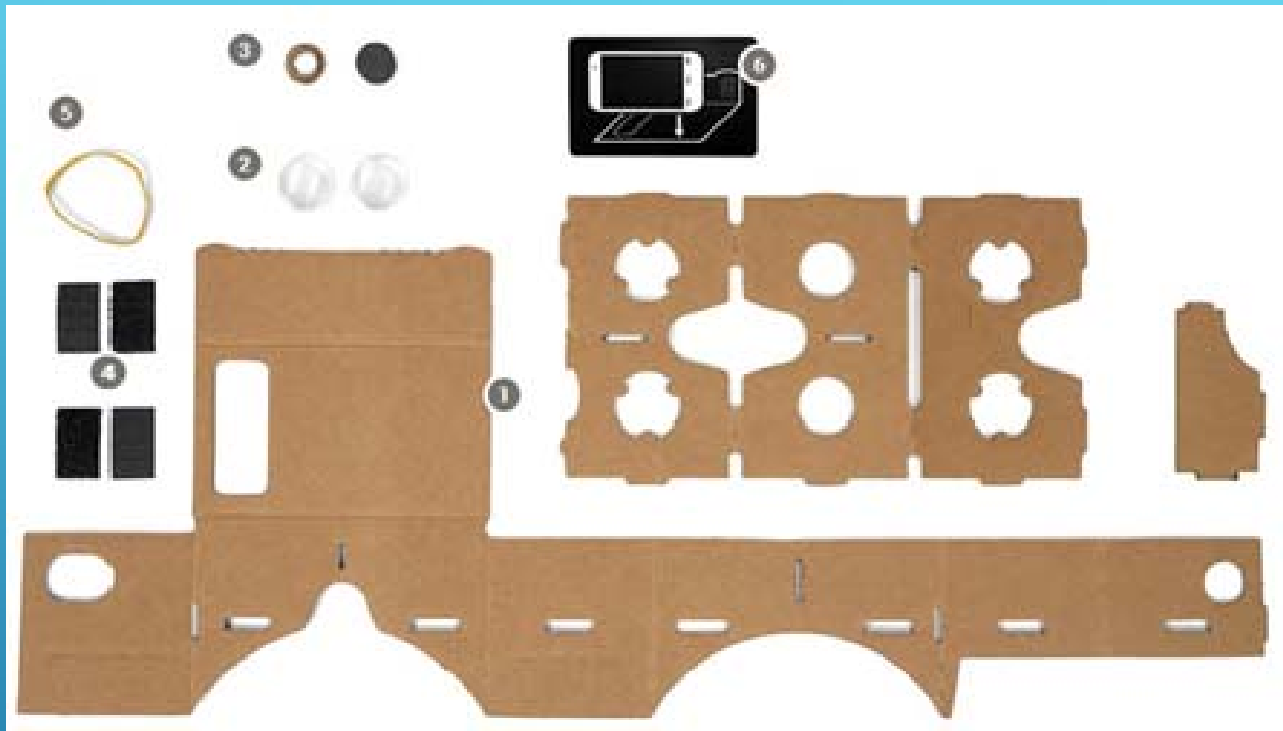
KWORLD VR-06



4. GOOGLE CARDBOARD 3D/VR DIVICE









<https://www.youtube.com/watch?v=9zTX2IZj1HU&t=9s>





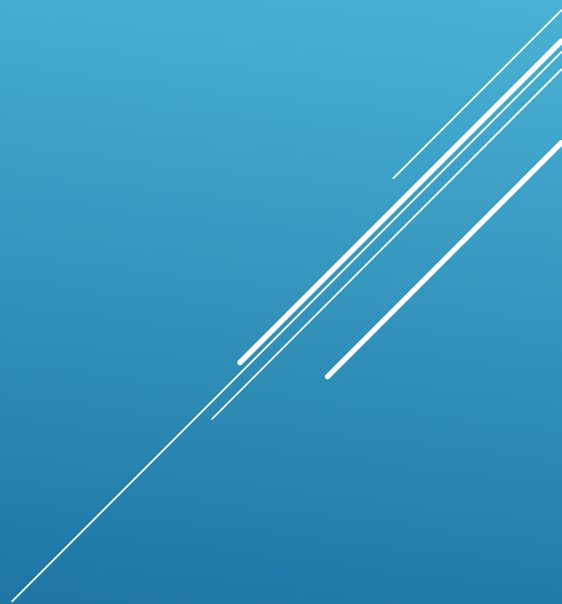


▶ Comet Holmes



AWESOME MOMENT FROM THE OTHER AUTUMN....
2007.10.28 LTC 21:37

BY JIM FROM TAM ROOF, TAIPEI CITY





Sidus Ludovicianum
路德維希之星

Alcor
輔

Mizar B
Mizar A
Mizar
開陽





21:12:41
21:08:34
21:04:15
20:58:04
20:52:50
20:48:13
20:43:19

COMET C/2001 Q4 (NEAT)

於新莊高中操場

(新莊社大天文班2004年課間師生觀攝檔案)

20/2000 MEADE LX200 REDUCED TO F6.3 (20/1260)

EXP. TIME: EACH 30SEC.

BY JIM FROM HSINCHUNG, TAIPEI COUNTY, TAIWAN

2004/05/10 20:43~21:12



≡ 、 CASE OF ASTRONOMY TEACHING WITH 3D / VR ASTRONOMY IN WENSHAN COMMUNITY UNIVERSITY, TAIPEI

- ▶ 1. Mr Chung Wen Chen:
- ▶ 76 YEARS OLD
- ▶ (On course 15 yr)





2. CASE OF ASTRONOMY TEACHING WITH 3D / VR ASTRONOMY IN WENSHAN COMMUNITY UNIVERSITY, TAIPEI (CONTI.)

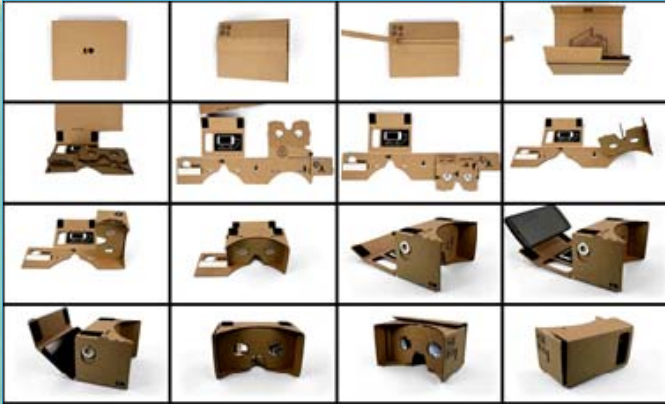
- ▶ 2 .Mr Shou Chuen Hsu:
- ▶ 86 YEARS OLD
- ▶ (On course 17 yr)

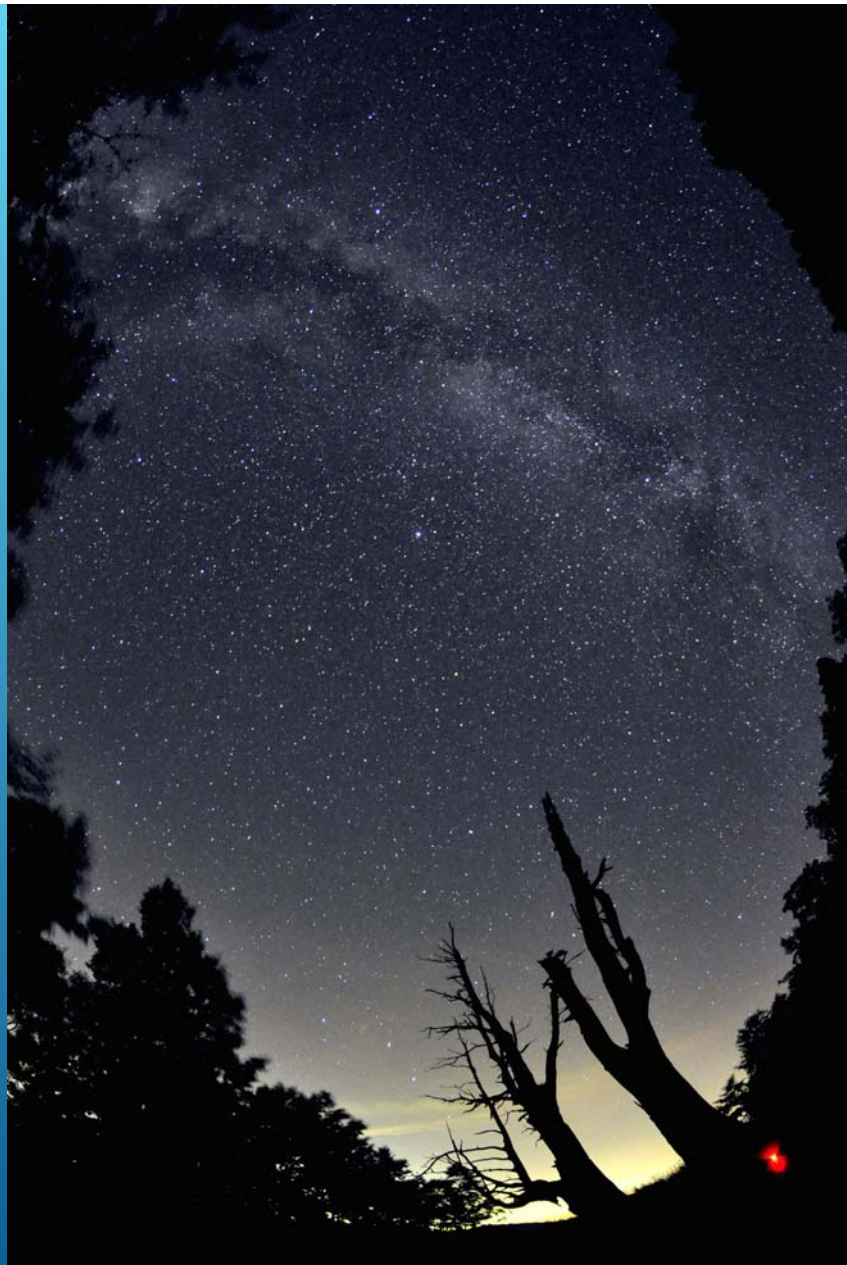


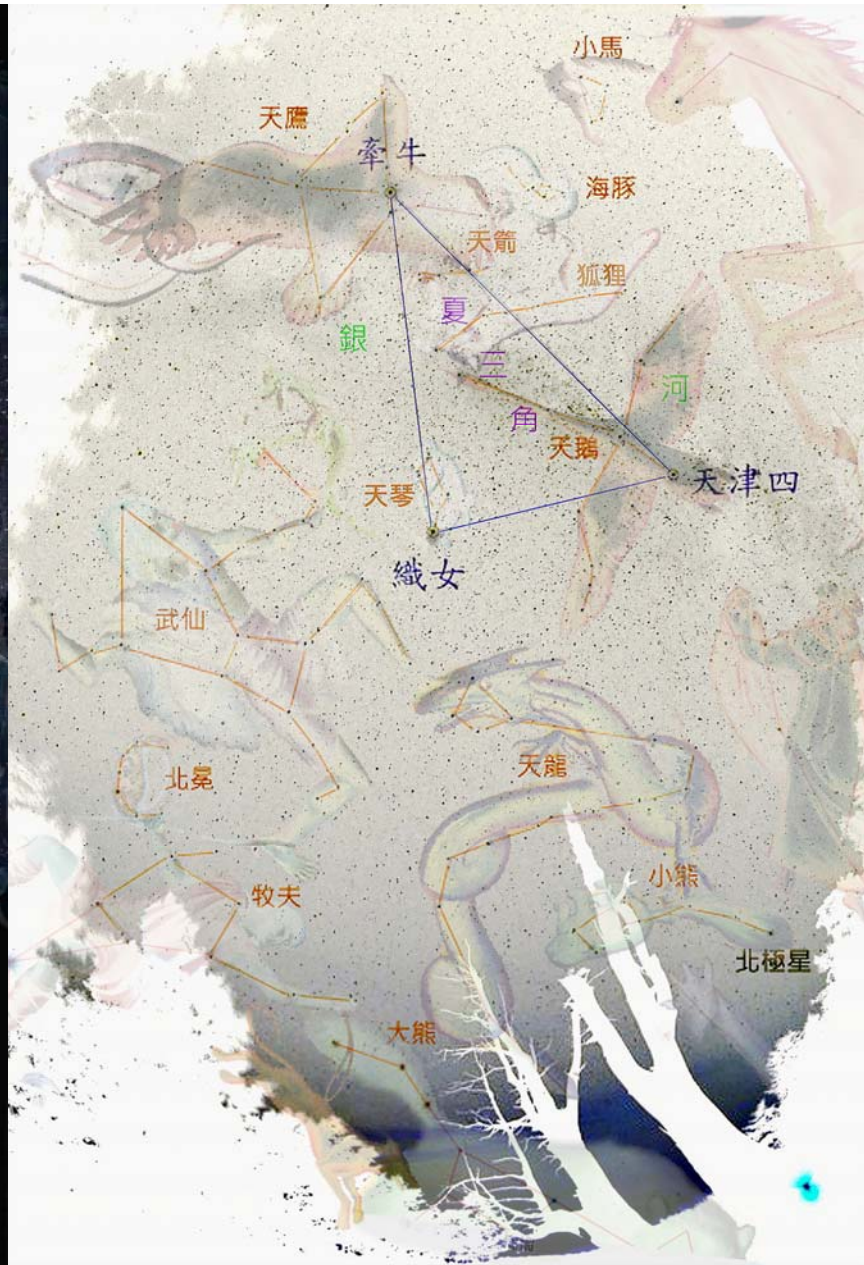
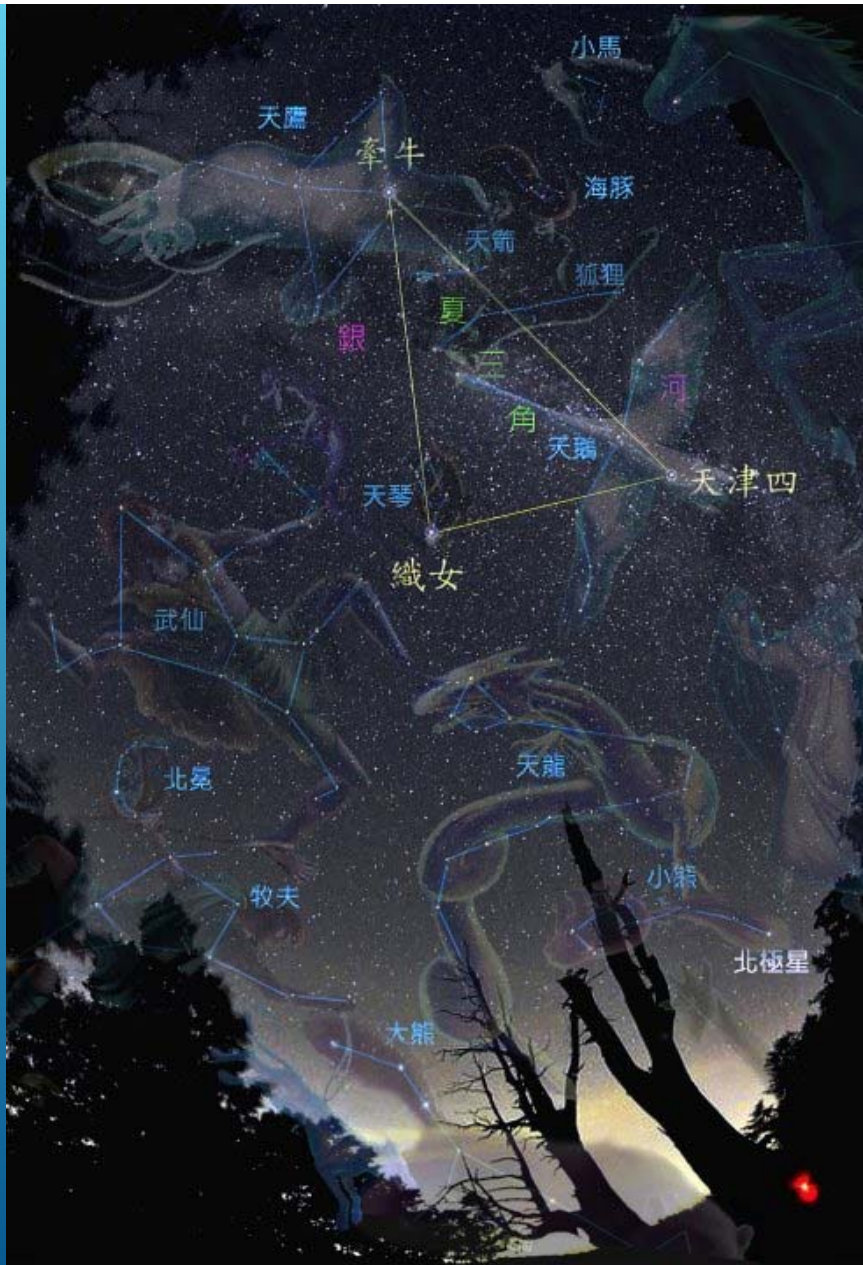












[HTTPS://WWW.FACEBOOK.COM/JIM.HUNG.94/VIDEOS/VB.544725761/10150300655985762/?TYPE=2&THEATER](https://www.facebook.com/jim.hung.94/videos/vb.544725761/10150300655985762/?type=2&theater)

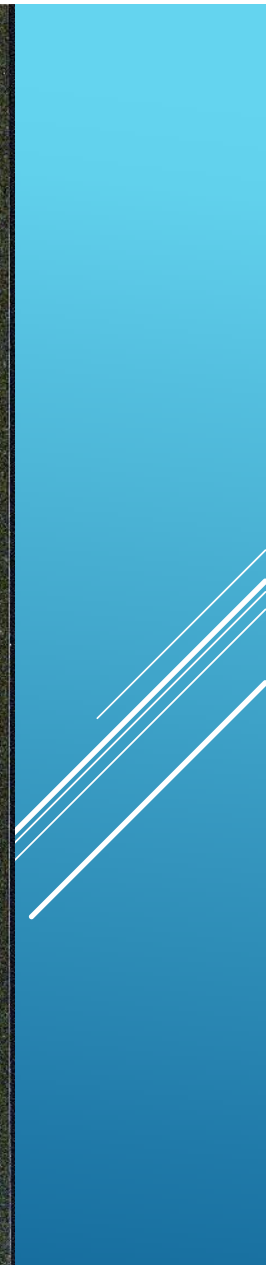




© 1996 JIM HUNG



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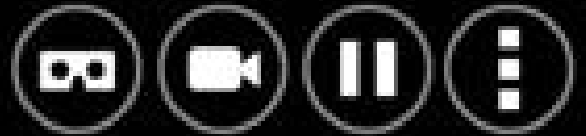
3.教學應用APP: SITES IN VR





APP: SITES IN VR

← MOON • Apollo 17





MARS • Columbia Hills



GALAXY MILKY WAY

+ STAR MAP

360° 8 K



四、CASE OF ASTRONOMY TEACHING ASTRONOMY IN SHILIN COMMUNITY UNIVERSITY, TAIPEI

**Mr Mao Hsiung Chen:
73 YEARS OLD
(On course 4 Semesters)**




- ▶ Mr. Mao Hsiung Chen uphold not only the hearts of star-lover volunteers enthusiastic astronomy interest, but also to help the planetarium for Star -Primary School, charity camp team to enhance the astronomical knowledge of school children among vulnerable groups .
- ▶ He is such an enthusiastic volunteer worker and is an indispensable assistant to the astronomical museum.





- ▶ During the implementation of the tour guide or hands-on workshop, he always comes with innovative ideas, the production of navigation auxiliary aids, such as large constellation disk, lunar globe, space telescope, space exploration ship, help a lot to the tour guide .


CONCLUSION




- ▶ To provide adequate astronomical learning courses meeting the needs of elderly, is the key point to attract the elderly to participate in the learning of the astronomy.
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- ▶ Providing appropriate teaching materials and teaching method can improve the learning efficiency, is an indisputable fact.
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- ▶ Lifelong learning society has come, the elderly learning is the indicator of social evolution.
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- ▶ The elderly to participate in adaptive learning courses with a flexible learning course materials and a flexible teaching interaction,
 - ▶ will enable the elderly to learn more and learn in more fun.
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- ▶ Can surely make teaching activities more in line with the expected teaching effect.
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- A decorative graphic consisting of several parallel white lines of varying lengths, slanted upwards from left to right, located in the bottom right corner of the slide.



- ▶ To Watanabe Sensei, Jim finally dig out this photo from deep inside his old hard-disk!
 - ▶ Couldn't wait to share it promptly with you~
 - ▶ P.S.: It dated 2004年3月13日!
 - ▶ – mit Junichi Watanabe, Al Nagler und Barry Gooley – hier: Japan.
- 
- A decorative graphic consisting of several parallel white lines of varying lengths, slanted upwards from left to right, located in the bottom right corner of the slide.





洪景川 研究助理

Jim Ching-chuan Hung

Research Assistant

台北市立天文科學教育館
TAIPEI ASTRONOMICAL MUSEUM

台北市士林區111基河路363號

No.363, Kee-Ho Rd., Taipei, Taiwan, ROC

Tel: 886-2-2831-4551 ext. 605

Fax: 886-2-2831-4405 / 886-2-2831-4578

