

Stellarium Lab (March 19th)

① Neptune

Time visible: 4:15 ~ 15:00

Time visible (Mar 19)	4:15 ~ 15:00
Time visible (Mar 23rd)	4:12 ~ 14:42
Time visible (Mar 30)	3:50 ~ 14:13
Time visible (April 4th)	3:19 ~ 14:05
Time visible (April 11th)	2:47 ~ 13:02

RA/DE	= 21h 42m 05s / -14° 6' 54"
RA/DE	= 21h 42m 30s / -14° 4' 29"
RA/DE	= 21h 43m 19s / -14° 6' 30"
RA/DE	= 21h 43m 51s / -13° 57' 53"
RA/DE	= 21h 44m 32s / -13° 54' 33"

* I observed that the track doesn't change a lot (such as altitude and location), but it is keep moving to south whenever the day passes by.

②

Name	Procyon
Magnitude	0.40 B-V: 0.48
Distance	11.41 light years

Name	Sirius
Magnitude	-1.45 B-V: -0.03
Distance	8.60 light years

Name	Rigel
Magnitude	0.15 B-V: 0.04
Distance	772.88 light years

③ Star name: HP 39425

(Mag: 17.40, B-V: 0.57)
(Dis: 170.96 light years)

→ I clicked a star named 2 Mar,
And its information is:

[Mag: 3.90 B-V: 1.01
Dis: 144.25 light years]

* Yes, it is further away from the earth than the star which is visible does, and the star which is closer to the earth is brighter than the star which is further away.

* When I first observed those stars, I thought their magnitude and distance will be almost the same - because they looked very similar. However, I found out that the further the stars are from the Earth, the darker their magnitudes are. The closest star, Sirius, was the brightest, and the furthest star, Rigel was the darkest.

④ Location: Shanghai, China (Az/Alt = 359° 16' 53" / 34° 12' 30")

RA/DE = 2h 31m 48.8s / 89° 15' 51.1"

Location: Barrow, Alaska, USA (Az/Alt = 358° 31' 13" / 70° 45' 05")

RA/DE = 2h 31m 48.8s / 89° 15' 51.1"

* The sky is different, for example, in Shanghai, it was still afternoon (sun hasn't set yet) but in Barrow, it was very dark, like it's 3 a.m. In addition, the stars (including polaris) moved to more south, its altitude has been increased. For example, I just moved cursor a little bit up to find polaris, but I had to move the cursor a lot north and higher than

⑤ Instead of moving to far north, I changed my observation place to the far south.

PLACE: Stanley, Falkland Island.

* The most obvious observation I made is the disappearance of the polaris. I couldn't see the polaris anymore. In addition, most planets/stars moved a little bit lower and a little bit (actually, a lot) to the West. I also observed that it became darker.

In case of Shanghai, the stars spin around a galaxy called Polaris Borealis, but in case of Stanley, they go around near a galaxy named Polaris Australis.

Example) Neptune (March 23rd)

Shanghai

RA/DE: 21h 42m 30s / -14° 4' 29"

Az/Alt: 273° 23' 29" / -33° 42' 16"

Stanley

RA/DE: 21h 42m 31s / -14° 4' 24"

Az/Alt: 174° 55' 40" / 29° 32' 42"

⑥ (1) M16 (Eagle Nebula)

Location

every Az/Alt is setted as March 19th

- RA/DE = 18h 19m 22s / -13° 50' 54"
- Az/Alt = 125° 6' 20" / +24° 11' 44"

Observation

- Cluster associated with Nebulosity
- It seems like a bunch of stars combined - I could see a purple bunch of dust and gas with purple colored stars. It doesn't seem very bright because it is quite far away from our Earth, I think.

(2) M31 - NGC 224 (Great Nebula in Andromeda)

Location

- RA/DE = 0h 43m 19s / 41° 21' 57"
- Az/Alt = 309° 40' 44" / 14° 47' 31"

Observation

- A Galaxy, located near Andromeda (constellation).
- I could see a white core (nucleus) in the middle of the galaxy, and some purplish gas which seems to be stars and planets in the galaxy is around the nucleus. It is one of the galaxies that are clearly visible in the sky.

(3) Pleiades (NGC 1432 - Nebula)

Location

- RA/DE: 3h 46m 45s / 24° 2' 01"
- Az/Alt: 275° 8' 15" / 43° 1' 59"

Observation

- One of the most intriguing nebulas in the sky.
- It looks like a bunch of nebulas combined which has a bright starlike core inside. It is very huge, and since it is very bright, I think it has been made quite recently.

(1) M16

(2) M31

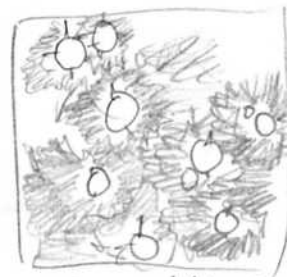
(3) Pleiades



[Very dark purple]

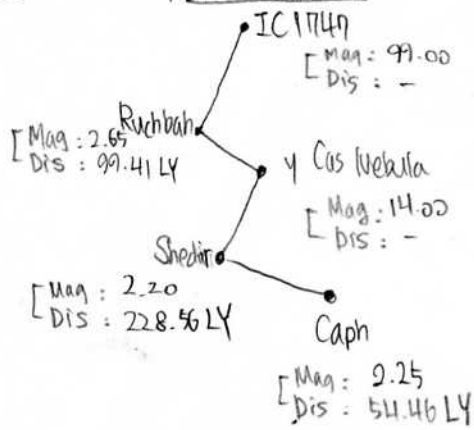


[Blue-Purple-black]



[Purple & blue]

⑦ (1) Cassiopeia



* Location = Northern part, near horizon

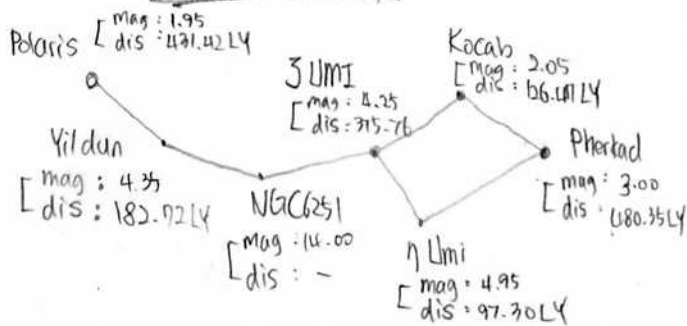
- It is almost always fully visible in Shanghai, but during 23:00 - 1:00, You can't observe the Ruchbah and Shedir.

* Image: A woman sitting on a chair, upside down.

* There is two Nebulas and 3 stars in Cassiopeia. I think people connected those stars to make Cassiopeia because their magnitudes are almost the same - except the nebulas, because they consist of a lot of bright stars.

* They are not close to each other, their distance from the earth is all different.

(2) Ursa Minor



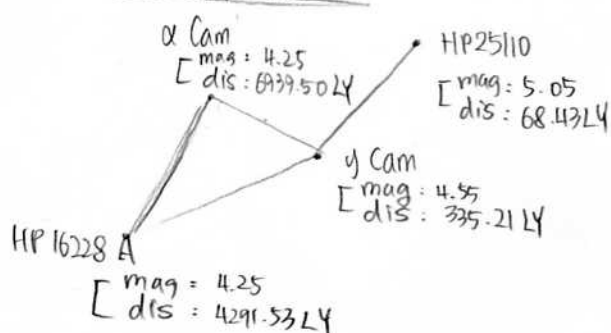
* Location = Near Polaris

- Visible every day and night, because it is spinning around the polaris closely.

- Image: a small bear, or a little dipper

* 7 stars combined (1 star not able to observe), and their magnitudes are almost the same. I think this is why the ancient people connected those stars. In addition, they are not actually very close - their magnitude are the one which is similar.

(3) Camelopardalis



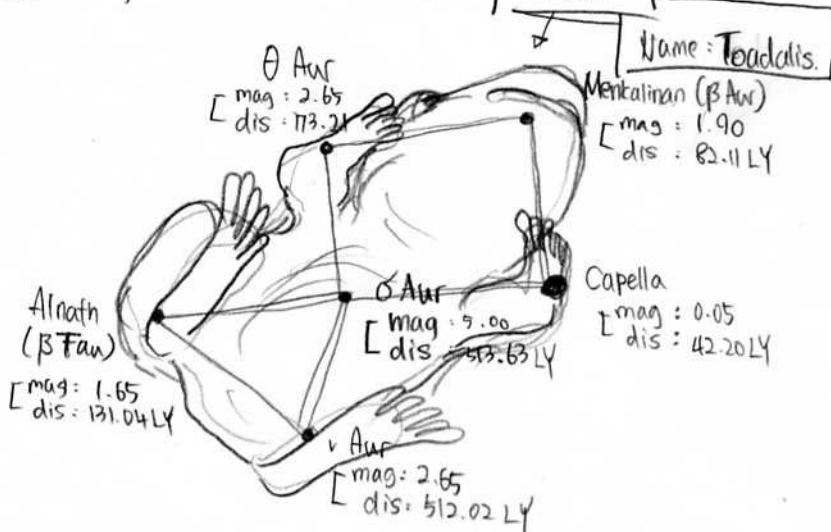
* Location: Near Polaris, Northern part

- Visible almost every day, but HP 16228 A might not be visible 24:00 - 1:00. You can barely see the whole thing.

- Image: A giraffe. HP 25110 as the head and the neck, and other stars as body and legs.

* 4 stars combined, and their magnitudes are the same also. I think the ancient people made this constellation because the brightness of the stars are almost the same. However, there is nothing to do with distances because there are obvious difference of distances here; they are almost 3000 or more differences!

⑧ My Own Constellation - "Toad"



* Process

1. I picked stars that are close enough to make a constellation.

(I tried not to use nebula, because it might be confusing)

2. I connected them to make a toad-like shape (actually it looked like a fish, but I prefer naming it as toad).

3. I wrote the stars' names, and named my new constellation.

close enough & similar magnitude, as ancient people did