

2021, Feb. 17

Where the dust storm occurs in Chryse

ALPO Japan Makoto Adachi

In 2005 and 2020, a regional dust storm occurred in Chryse (35W, +10). Fortunately, the observation conditions were very good from Japan, and many observation records were obtained. The place where this dust storm occurred was the position of the lower left image. It is hard to see, but it is a II-shaped light spot.



Image on the left

Kumamori, November 11, 2020

The light spot at the tip of the arrow in this image is the first phenomenon of dust storm that clearly spreads from November 12, 2020.

Because 2005 and 2020 were the same phenomenon. I checked all the reported images for the 2018 and 2020 seasons, with the expectation that a dust storm could be seen if there were light spots at this location. As a result, I found an image that was brightened many times during the season.

A video of the phenomenon that occurred in 2005 was created by Mr. Iga, and the progress is recorded and released.

http://alpo-j.sakura.ne.jp/kk05/duststorm_051018.htm

In addition, Kumamori recently released the 2020 Dust Storm as a video.

<http://alpo-j.sakura.ne.jp/> Posted on November 28th

Even if you look at these two, you can clearly see that they are occurring in the same place.

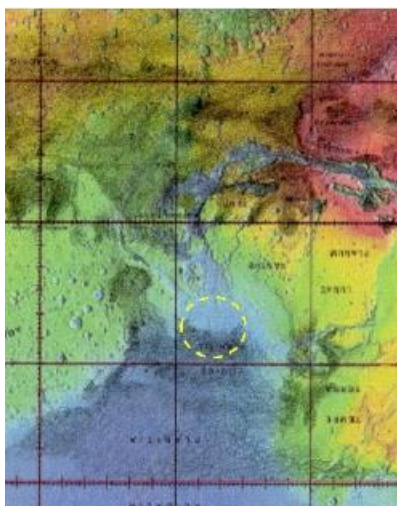
Source survey results

As you can see in the image above, the source was the southern edge of Niliacus Lacus (20 ~ 40W, +30), and I searched for something that looked bright in the shape of II. Basically, I examined two seasons, 2018 and 2020.

Here, we will publish some of the 2005 and 2016 discovered during the survey.

	Occurrence point	The situation of next day
2005, Oct 13	become brighter →	A local dust storm occurs.
2005, Oct 18	become brighter →	A regional dust storm occurs.
2016, Sep. 18	become brighter →	It gets a little brighter, but it occurs on the 14th.
2018, Mar. 26	become brighter →	A local dust storm occurs.
(From May 28th, it will be difficult to track due to the occurrence of a global dust storm.)		
(Dust became lighter and investigation resumed from September 1st)		
Dec.31	Somewhat bright →	A local dust storm occurs.
2020, Mar 11	become brighter →	There is no observation in the area
May, 21	become brighter →	There is no observation in the area
Jun, 22	become brighter →	There is no observation in the area
Jun, 23	become brighter →	A regional dust storm occurs.
Sep, 24	become brighter →	Dust storm does not occur
Nov, 11	become brighter →	A regional dust storm occurs.
		(2020 South Course Dust Storm)
Nov. 14	become brighter →	A regional dust storm occurs.
		(2020 East Course Dust Storm)

Survey results (As of February 17, 2021)



As mentioned above, the phenomenon of brightening was recorded nine times in the 2018 season and the 2020 season. Since there is no observation record of the next day, the change of each time is unknown, but it was found that 6 out of 7 observations of the next day develop into dust storm. It wasn't a dust storm only once, and the result was that it was rather rare.

Looking at the point of occurrence on the topographic map, it looks like the figure on the left. It is located on a plain with no irregularities. It turns out that the probable cause is the place where the wind blowing from north to south converges in the valley. In other words, it is a path for the wind.

In the future, I would like to expand not only the above season but also the age of investigation.