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Recording Images of Noctilucent Clouds in Russia From 1999 (Extended Abstract)

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Extended abstract:

We have started a project to record images of noctilucent clouds (NLCs) throughout summer in Russia.

Our scientific objectives of this project are as follows:

1) To see nature of NLC formation by the investigations of periodic, or intervals of, occurrences and longitudinal distributions of NLCs. Note that there are no systematic observations on the longitudinal distributions of NLCs as yet. We may conclude within a few year on the problem whether the 5 to 6-day periodicity of bright NLCs is due to planetary waves or due to self-organized one, ie, consumption of water vapor by ice particles in the formation of the cloud itself.

2) Ground-based recordings are indispensable to obtain informations about long-term variations of NLC occurrences. We can inspect global changes through variations of NLC seasons, periodic intervals of occurrences, and their brightness. Also long-term data will supply valuable basis for concentrated observations of NLCs by spacecraft instruments.

In 1999 we set an automatic CCD imager at Yakutsk, and found NLC occurrences on 19 July and 10, 11, 15, 20 August. In 2000 we extended similar observations at Novosibirsk and Moscow. Posotive results of displays of noctilucent clouds in 2000 are listed in Table 1, where on 4 August we see very bright NLCs in Yakutsk. Note that NLCs appeared at Novosibirsk on June 17, 18,

Table 1

	June	July	August
Yakutsk		20, 21, 31	1, 4, 6, 9, 12
Novosibirsk	11, 17, 18, 20	1, 3, 9, 11, 12, 13	
Moscow	29	3, 6, 12/13	

NLC identified nights in Russia 2000. Date is in UT.

20 succedingly, but these are faint and partial clouds in the night sky. Due to weather conditions we may have missed NLCs, but it must be stressed that there were many nights with no NLCs in the clear sky between NLC occurrences. We anticipate further observations will give interesting information wheather NLCs are inclined not to be bright in the period of high solar activity or not.