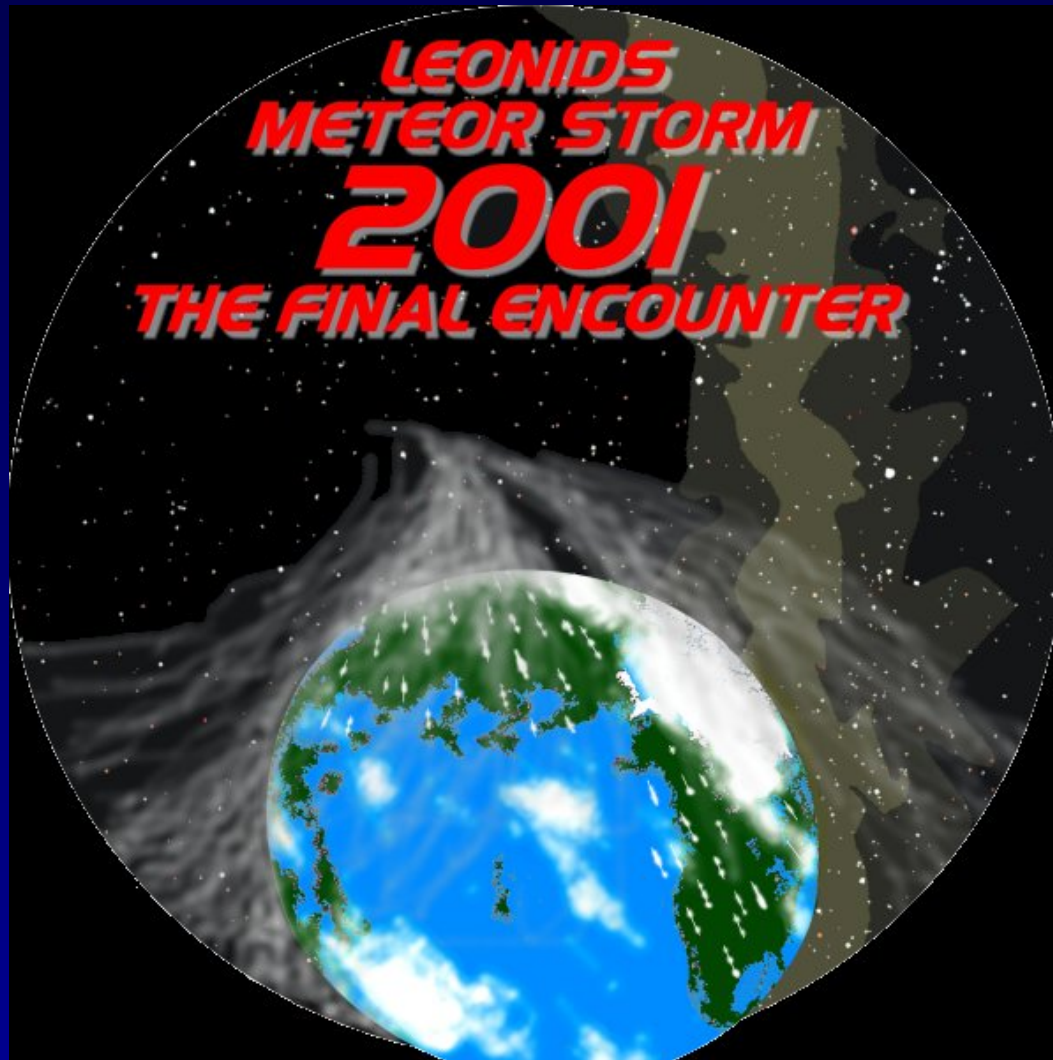


# The Sino-Dutch Leonid Expedition 2001



# The Sino-Dutch Leonid Expedition □□□□

## *Introducing...*

### Jos Nijland,

Dutch Meteor Society (DMS)

Membership since 1984

HASA-team from 1979 to +/- 1987

Sticht. J.C. v.d. Meulen: since 1997

Primarily visual observer

Photografic: since 1992

Many expeditions from 1990

### Casper ter Kuile,

Dutch Meteor Society (DMS)

Membership since 1979

HASA-team from 1979 to +/- 1987

Delphinus-team since 1982

Primarily photographic

Webmaster “<http://www.dmsweb.org>”

Many expeditions from 1990

# The Sino-Dutch Leonid Expedition □□□□

## *Contents of the presentation*

- The beginning
- The Sino-Dutch Leonid Expedition 1998
- The Sino-Dutch Leonid Expedition 2001
- Preview Leonids 2002

# The Sino-Dutch Leonid Expedition □□□□

## *The beginning of Leonid Expeditions*

- 1994 : US
- 1995 : Spain
- 1996 : France & Spain
- 1997 : Netherlands, Germany & US
- 1998 : China
- 1999 : Spain & Portugal
- 2000 : Netherlands, Spain, Portugal

# The Sino-Dutch Leonid Expedition □□□□

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## *Why Expeditions?*

Meteor-observing...

Science...

Experience the world...

# The Sino-Dutch Leonid Expedition □□□□

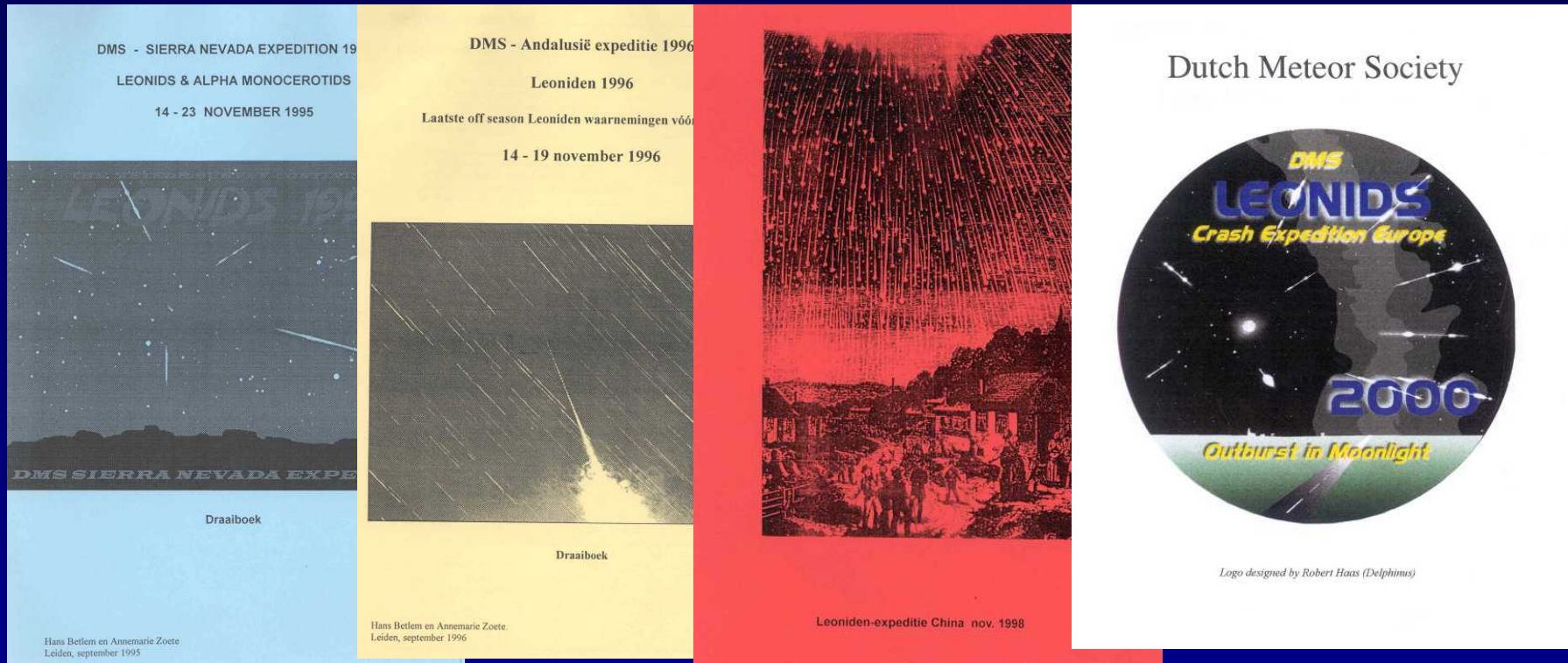
Leonid Expedition Logo's  
Designed and Produces by Robert Haas



Leonid Expedition Logo's  
Designed and Produced by Robert Haas

# The Sino-Dutch Leonid Expedition 2001

## Expedition Handbooks



Leonids 1995

Leonids 1996

Leonids 1998

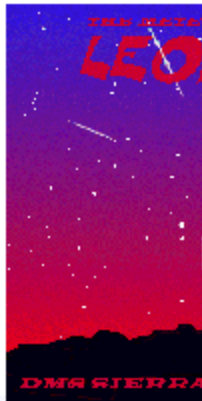
Leonids 2000

# The Sino-Dutch Leonid Expedition 2001

## Reports of Expeditions

Jos Nijland, Benningbroek

Jos Nijland, Benningbroek



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Van 6 t/m 22

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Jos Nijland  
31 januari 1999

Leoniden Expeditie Fra  
Van 13 t/m 20 novem



Reisverslag

Jos Nijland  
3 februari 2001



Sino-Dutch Leonid Expedition 2  
Van 9 t/m 23 november 2001

Reisverslag



Jos Nijland  
27 januari 2002



# The Sino-Dutch Leonid Expedition 2001

## *The Leonids 1995 in Spain*



# The Sino-Dutch Leonid Expedition 2001

## *The Leonids 1996 in France*



# The Sino-Dutch Leonid Expedition 2001

## *The Leonids 1997 in the US & Netherlands*



# The Sino-Dutch Leonid Expedition 2001

## *The Leonids 1999 in Spain*



# The Sino-Dutch Leonid Expedition 2001

## *The Leonids 2000 in the Netherlands*



# The Sino-Dutch Leonid Expedition 2001

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# The Sino-Dutch Leonid Expedition 2001

Logo design and production:  
Robert Haas, Alphen a/d Rijn



Logo design and production:  
Robert Haas, Alphen a/d Rijn

# The Sino-Dutch Leonid Expedition 2001

*Leonids 1998: Searching for the best location in Asia*





# The Sino-Dutch Leonid Expedition 2001

*Leonids 1998: China - Delingha and Xinglong*



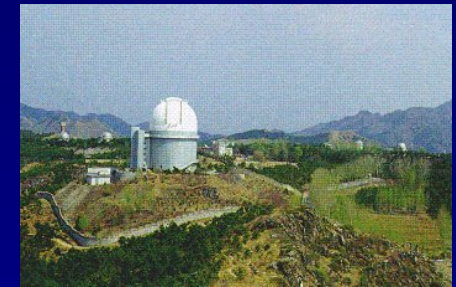
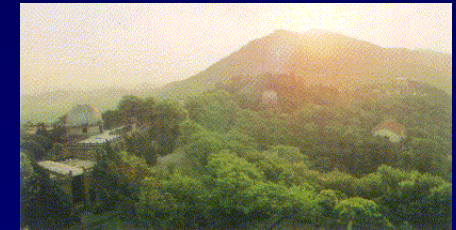
# The Sino-Dutch Leonid Expedition 2001

## Organising Sino-Dutch Leo'98

1. KNAW
2. CAS
3. BAO / PMO
4. Delingha / Xinglong
5. VNC
6. KLM
7. U-Freight



Koninklijke  
Nederlandse  
Akademie van  
Wetenschappen



# The Sino-Dutch Leonid Expedition 2001

## *Logistics Sino-Dutch Leo'98*

1. Powerunit
2. GPS
3. GSM
4. Laptop
5. Tools
6. EHBO-suitecase
7. Spare-materials



# The Sino-Dutch Leonid Expedition 2001

## *Leonids 1998 - 2001: the "Hazen" array*

Robert Haas, Alphen a/d Rijn



Robert Haas, Alphen a/d Rijn

# The Sino-Dutch Leonid Expedition 2001

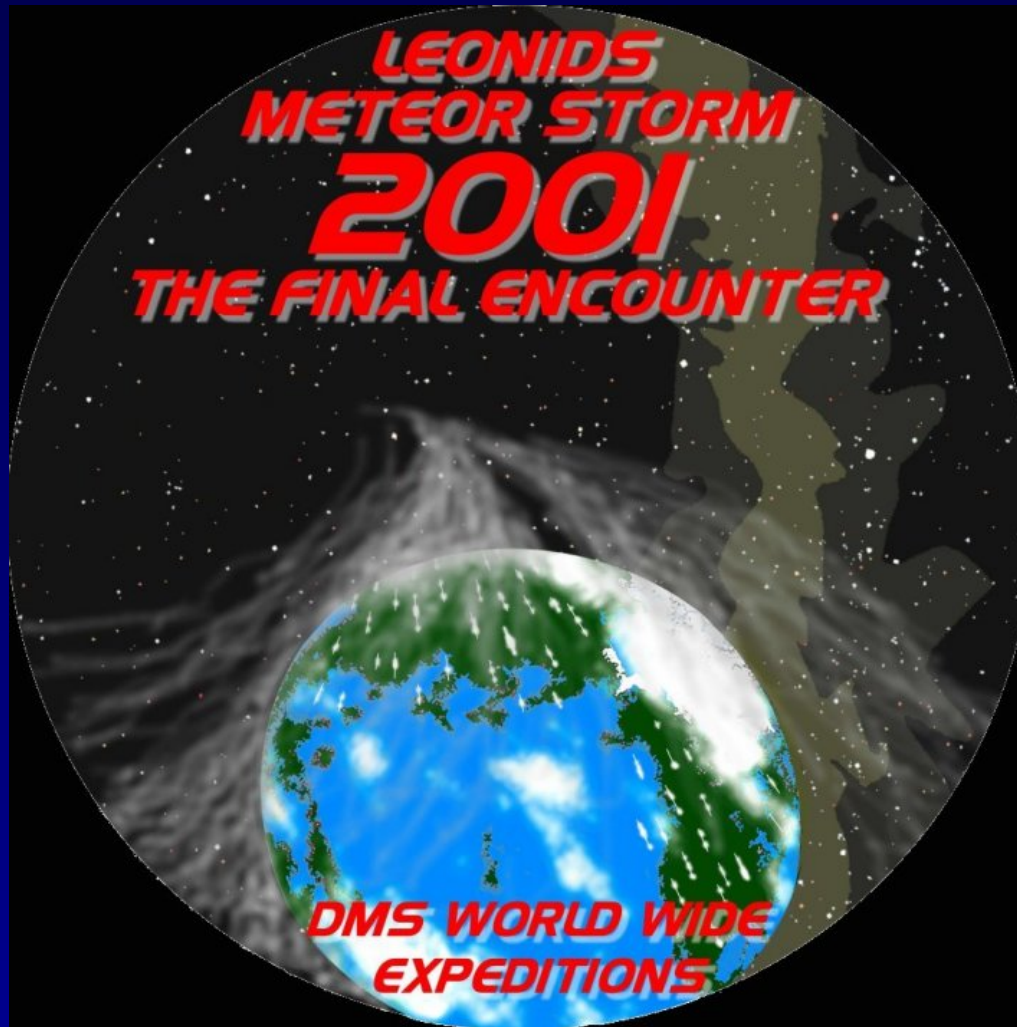
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# The Sino-Dutch Leonid Expedition 2001

Logo design and production:  
Robert Haas, Alphen a/d Rijn



Logo design and production:  
Robert Haas, Alphen a/d Rijn

# The Sino-Dutch Leonid Expedition 2001

Map showing locations



Map showing locations

# The Sino-Dutch Leonid Expedition 2001

Dutch observers of the SDLE





Dutch observers of the SDLE



# The Sino-Dutch Leonid Expedition 2001



The Sino-Dutch Cooperation

The Sino-Dutch cooperation



The Dutch Meteor Society (DMS)  
Purple Mountain Observatory (PMO)

## Sino-Dutch Leonid Expedition 2001



Study of comet P/Temple-Tuttle through observation  
of the 2001 Leonid meteor storm

Een voorstel voor een vervolg op de in 1998 aangegane samenwerking tussen het Chinese Purple Mountain Observatory en het Beijing Astronomical Observatory en de Dutch Meteor Society.

Een aanvraag bij de Koninklijke Nederlandse Academie van Wetenschappen voor ondersteuning bij de wetenschappelijke samenwerking tussen de Dutch Meteor Society en de National Astronomical Observatories van de Chinese Academy of Sciences.

Met aanbevelingen door:

- Dr. J. Lub, Onderzoeksinstituut Sterrewacht Leiden, Faculteit Wiskunde & Natuurwetenschappen van de Universiteit Leiden.
- Dr. Vladimír Porubčan, President of Commission 22 of the International Astronomical Union (IAU) *Meteors, Meteorites and Interplanetary Dust*.
- Dr. Zdeněk Ceplecha, Interplanetary Matter Department, Astronomical Institute, Academy of Sciences, Ondřejov Observatory, Czech Republic.

Dutch Meteor Society (DMS)

# The Sino-Dutch Leonid Expedition 2001

Presentations at NAOC / BAO



Presentations at NAOC / BAO

# The Sino-Dutch Leonid Expedition 2001

Presentations at NAOC / BAO



Presentations at NAOC / BAO

# The Sino-Dutch Leonid Expedition 2001

Presentations at NAOC / BAO

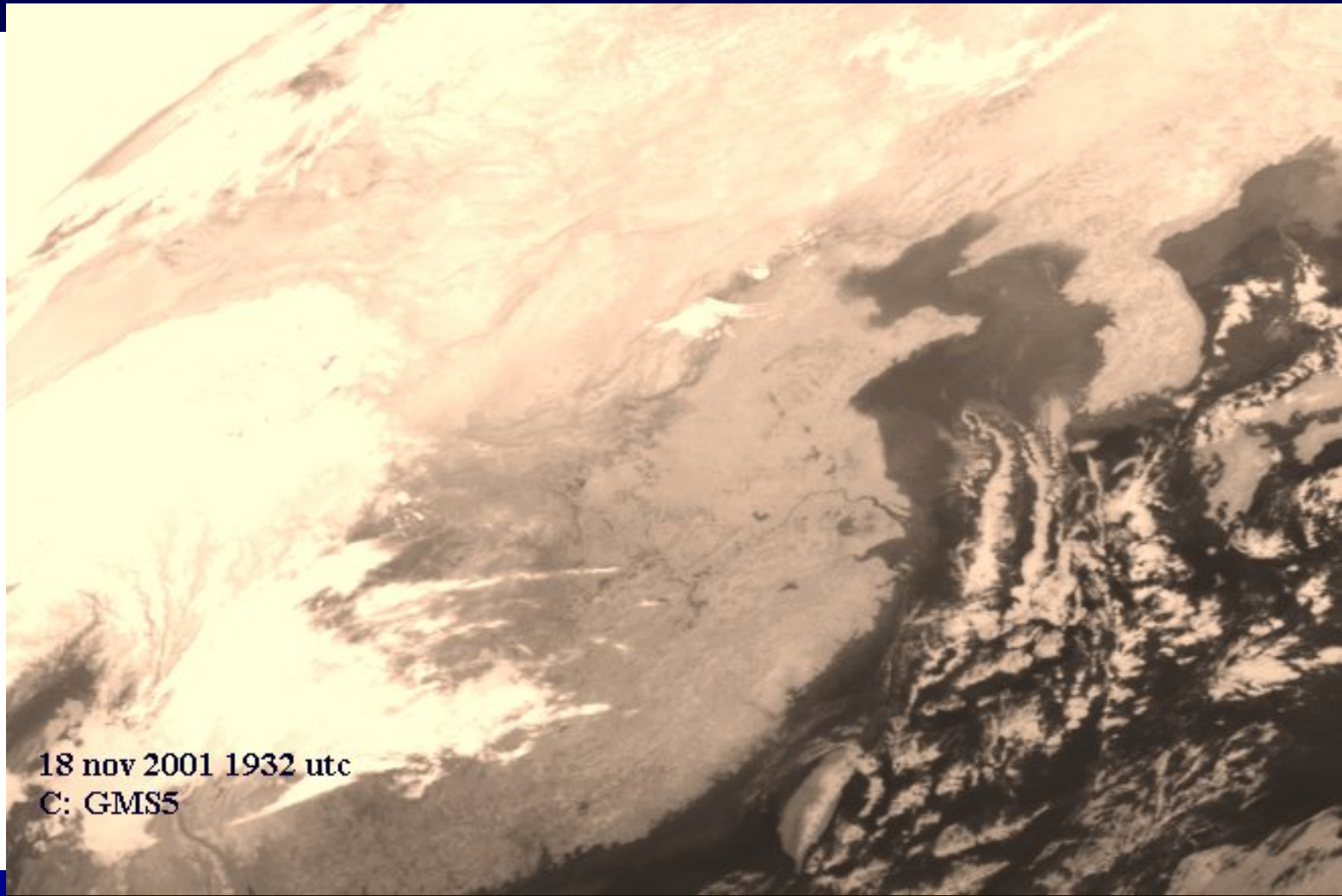


Presentations at NAOC / BAO

# The Sino-Dutch Leonid Expedition 2001

Weather forecasts:

Weather forecasts:



18 nov 2001 1932 utc  
C: GMS5

# The Sino-Dutch Leonid Expedition 2001

## Leonids 2001: Summary report

*Michel Vandeputte (PUTMI), Koen Miskotte (MISKO), Arnold Tukkers (TUKAR), Jos Nijland (NIJJO),  
Dan Xia (XIADA), Jin Zhu (ZHUJI)  
from Xinglong, PanShan and Miyun stations, NAOC, Hebei/Beijing, China*

<b>Interval [UT]</b>	<b>PUTMI</b>	<b>MISKO</b>	<b>TUKAR</b>	<b>NIJJO</b>	<b>XIADA</b>	<b>ZHUJI</b>
14:00 - 15:00	0	2	1	0	0	0
15:00 - 16:00	31	37	54	0	18	21
16:00 - 17:00	210	215	207	0	99	0
17:00 - 18:00	726	924	756	468	493	0
18:00 - 19:00	1519	1335	1388	1126	777	635
19:00 - 20:00	931	735	435	492	310	0
20:00 - 21:00	493	504	407	0	55	0
21:00 - 22:00	264	327	226	125	0	0
<b>Total</b>	<b>4174</b>	<b>4079</b>	<b>3474</b>	<b>2211</b>	<b>1752</b>	<b>656</b>

Visual Observations:

Visual Observations:

# The Sino-Dutch Leonid Expedition 2001

Photographic Observations:  
Building the third Hazenarray



Photographic Observations:  
Building the third Hazenarray

# The Sino-Dutch Leonid Expedition 2001

Photographic Observations:



Photographic Observations:



# The Sino-Dutch Leonid Expedition 2001

Photographic Observations:



Photographic Observations:

# The Sino-Dutch Leonid Expedition 2001

Photographic Observations:



Photographic Observations:

# The Sino-Dutch Leonid Expedition 2001

Photographic Observations:



Photographic Observations:

# The Sino-Dutch Leonid Expedition 2001

Photographic Observations:



Photographic Observations:

# The Sino-Dutch Leonid Expedition 2001

Photographic Observations:



Photographic Observations:

© 2001 R Haas [delsurf@cistron.nl](mailto:delsurf@cistron.nl)

# The Sino-Dutch Leonid Expedition 2001

Photographic Observations:



Photographic Observations:

# The Sino-Dutch Leonid Expedition 2001

NAOC & DMS Ceremony:  
A toast on the succes!



NAOC & DMS Ceremony:  
A toast on the succes!





# The Sino-Dutch Leonid Expedition 2001

Photographic Observations:  
Analysing using AstroRecord



Photographic Observations:  
Analysing using AstroRecord

# The Sino-Dutch Leonid Expedition 2001

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# The Sino-Dutch Leonid Expedition 2001

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DMS Leonid Expedition 2002  
Overview

- Astronomy
- Climate
- Locations
- Observers
- Techniques

DMS Leonid Expedition 2002  
Overview

# The Sino-Dutch Leonid Expedition 2001

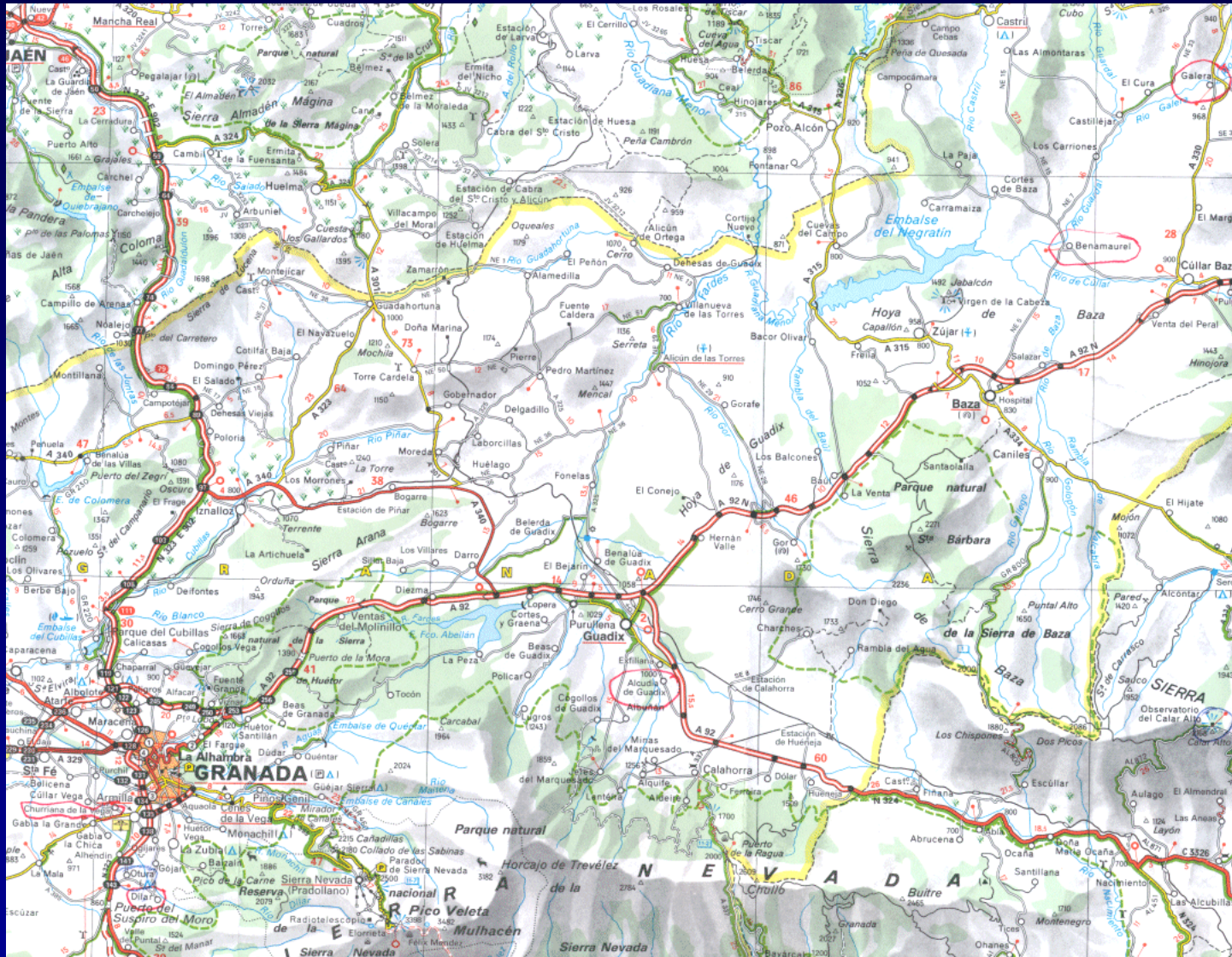
DMS Leonid Expedition 2002  
Design: Robert Haas



DMS Leonid Expedition 2002  
Design: Robert Haas

# The Sino-Dutch Leonid Expedition 2001

DMS Leonid Expedition 2002  
Map of Andalusia, Spain

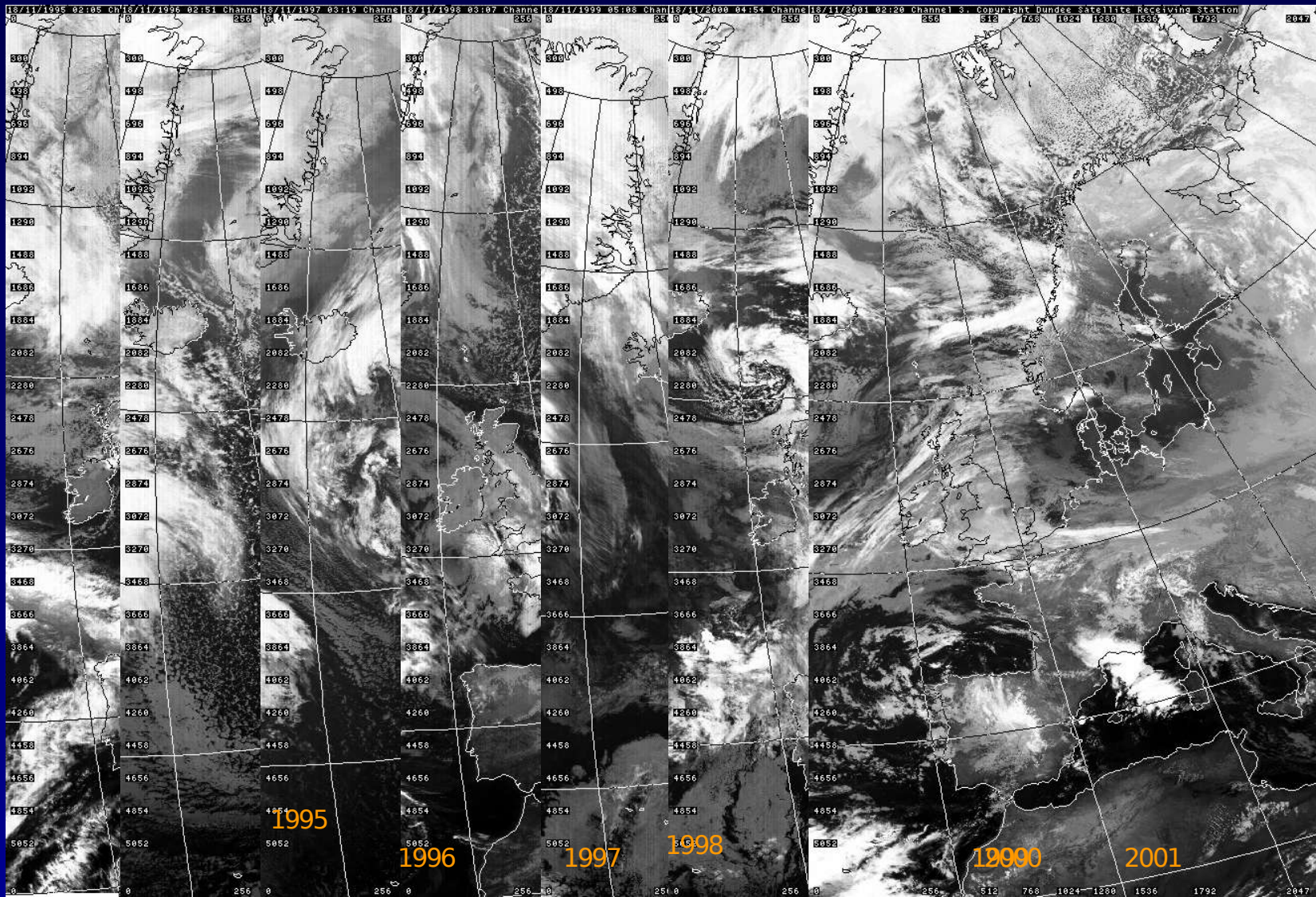


DMS Leonid Expedition 2002  
Map of Andalusia, Spain

# The Sino-Dutch Leonid Expedition 2001

Weather: NOAA's 1995 - 2001

Weather: NOAA's 1995 - 2001



# The Sino-Dutch Leonid Expedition 2001

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## Sources of weather-information

- Teletext
- Weatherline by telephone
- Mobile phone: SMS
- Newspapers
- Radio and Television
- Internet

# The Sino-Dutch Leonid Expedition 2001

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To conclude this presentation of the

Sino-Dutch Leonid Expedition 2001

We have a surprise!