FMCW Radar, Cold Land Processes Field Experiment

TABLE OF CONTENTS

1 FMCW RADAR, COLD LAND PROCESSES FIELD EXPERIMENT

1.1 Summary

FMCW Radar Profiles and Polarimetric Backscatter for February 19, 2002	**Radar Profiles**: Location: LSOS Snow Pit #1 Date: Feb 19, 2002 Radar Bandwidths: 2-6 GHz, 8-12 GHz, and 14-18 GHz Waveform: FMCW Modulation Time: 0.64 ms **Polarimetric Backscatter:** Ku-band FMCW radar polarimetric backscatter data from an 18-ft tower at LSOS. Location: LSOS Snow Pit #1 Date: Feb 19, 2002 Radar Bandwidth: 17-18 GHz Modulation Time: 64 ms Antenna: 25 dB standard gain Depression Angles: 50, 40, 30
FMCW Radar Profiles and Polarimetric Backscatter for February 21, 2002	**Radar Profiles**: Location: LSOS Snow Pit #1 Date: Feb 21, 2002 Radar Bandwidths: 2-6 GHz, 8-12 GHz, and 14-18 GHz Waveform: FMCW Modulation Time: 0.64 ms **Polarimetric Backscatter:** Ku-band FMCW radar polarimetric backscatter data from an 18-ft tower at LSOS. Location: LSOS Snow Pit #1 Date: Feb 21, 2002 Radar Bandwidth: 17-18 GHz Modulation Time: 64 ms Antenna: 25 dB standard gain Depression Angles: 50, 40, 30
FMCW Radar Profiles and Polarimetric Backscatter for March 25, 2002	

FMCW Radar Profiles and Polarimetric Backscatter for March 26, 2002	**Radar Profiles:** Location: LSOS Snow Pit #2 Date: Mar 26, 2002 Radar Bandwidths: 2-6 GHz, 8-12 GHz, and 14-18 GHz Waveform: FMCW Modulation Time: 0.64 ms

1.2 FMCW Radar Profiles for February 19, 2002

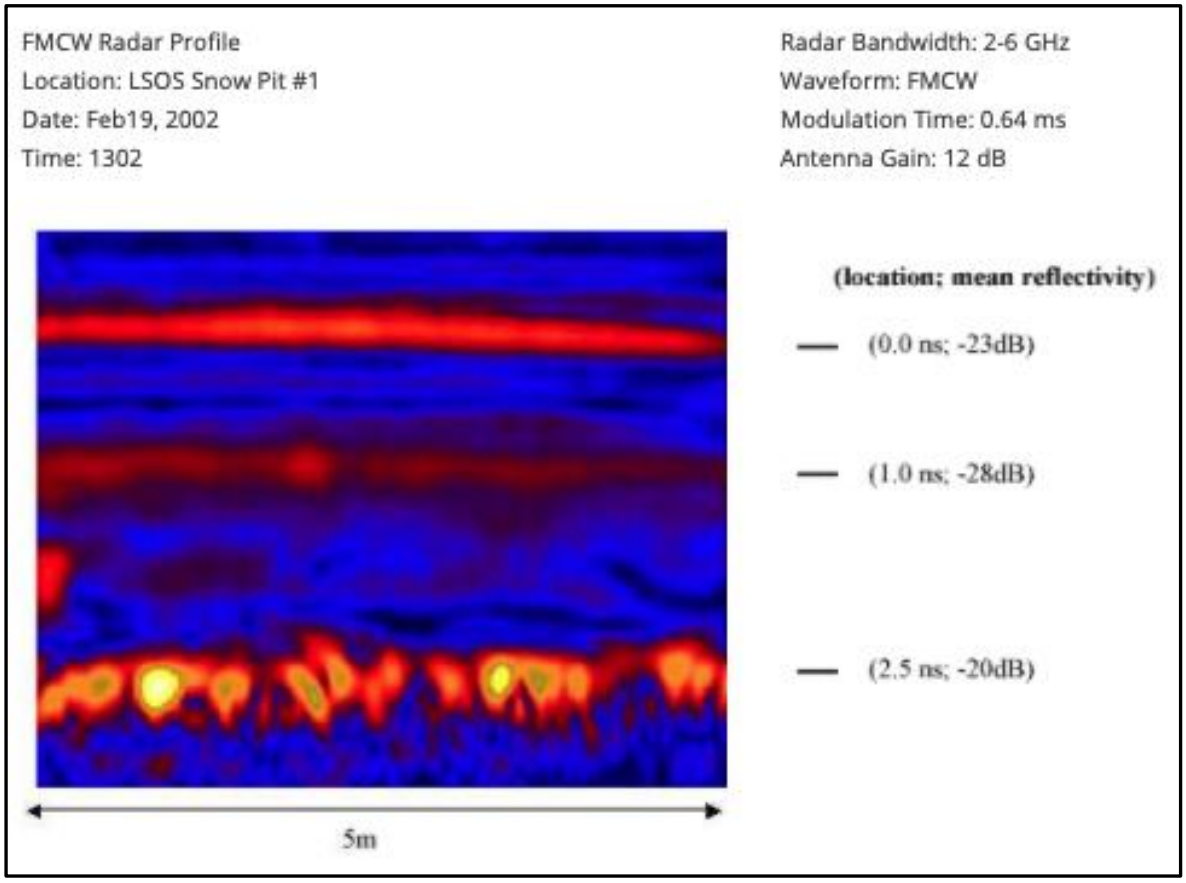

Figure 1. FMCW Radar Profile Location: LSOS Snow Pit #1 Date: Feb19, 2002 Time: 1302

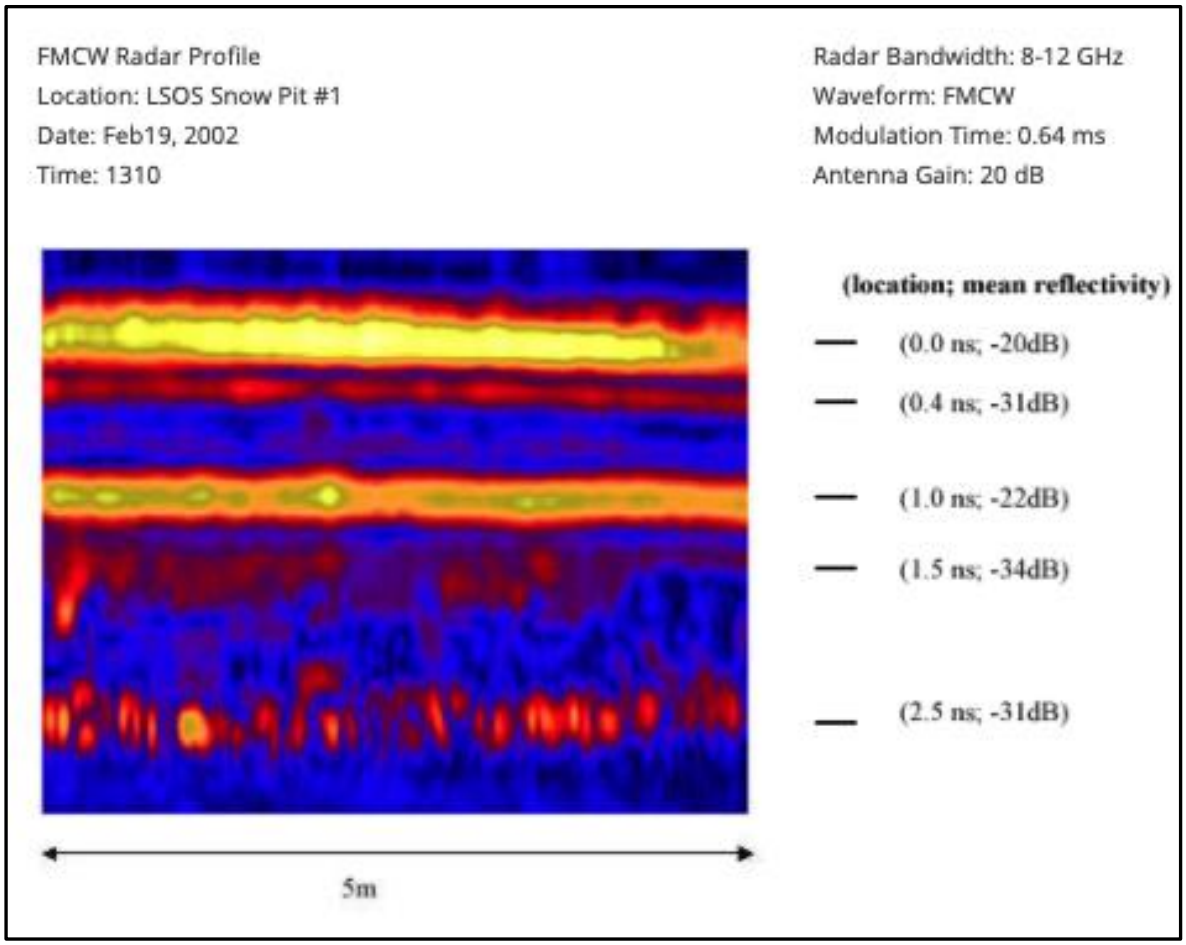

Figure 2. FMCW Radar Profile Location: LSOS Snow Pit #1 Date: Feb19, 2002 Time: 1310

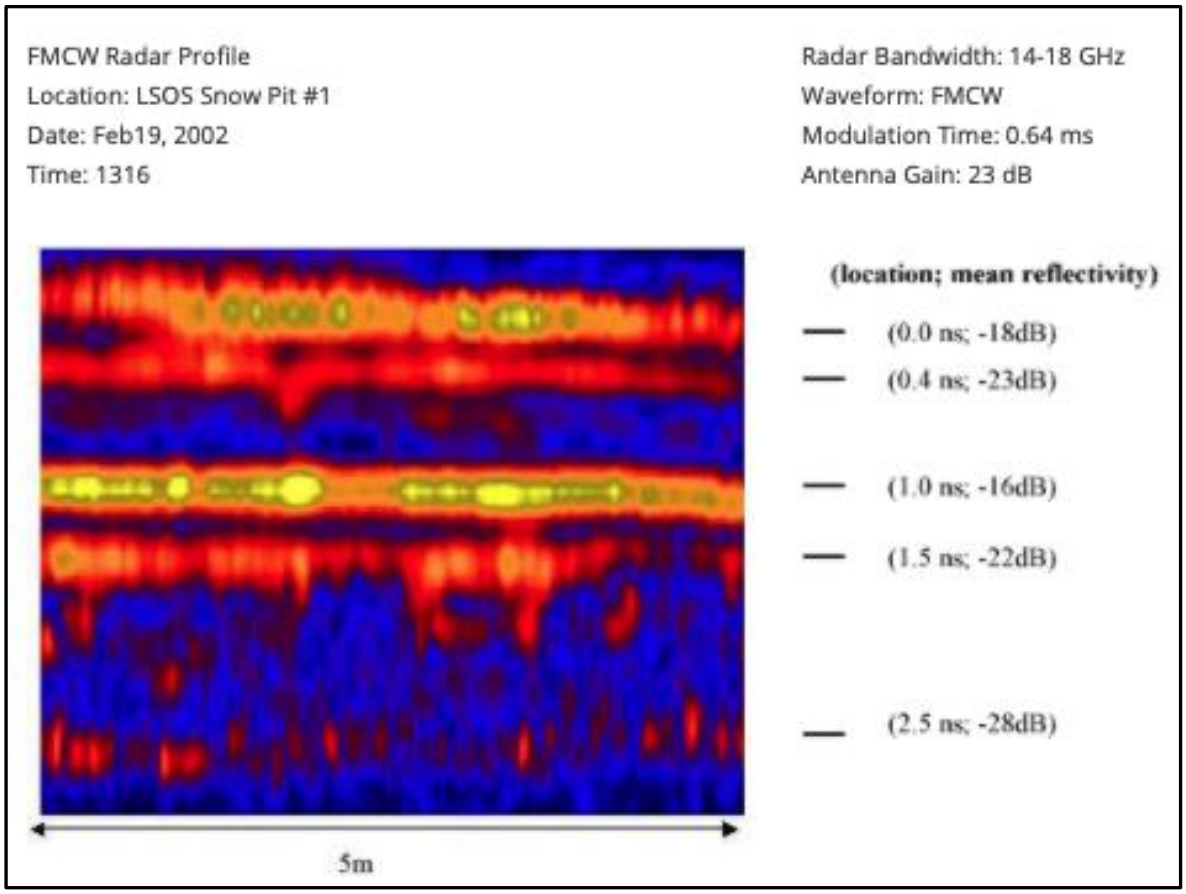

Figure 3. FMCW Radar Profile Location: LSOS Snow Pit #1 Date: Feb19, 2002 Time: 1316

1.3 Ku-Band FMCW Radar Polarimetric Backscatter for February 19, 2002

Ku-band FMCW radar polarimetric backscatter data from an 18' tower located near snow pit #1 at the LSOS:

- Radar bandwidth 17-18 GHz
- Modulation Time: 64 ms
- Antenna: 25 dB standard gain
- Depression Angles: 50, 40, 30
- Feb. 19, 12:30-13:30

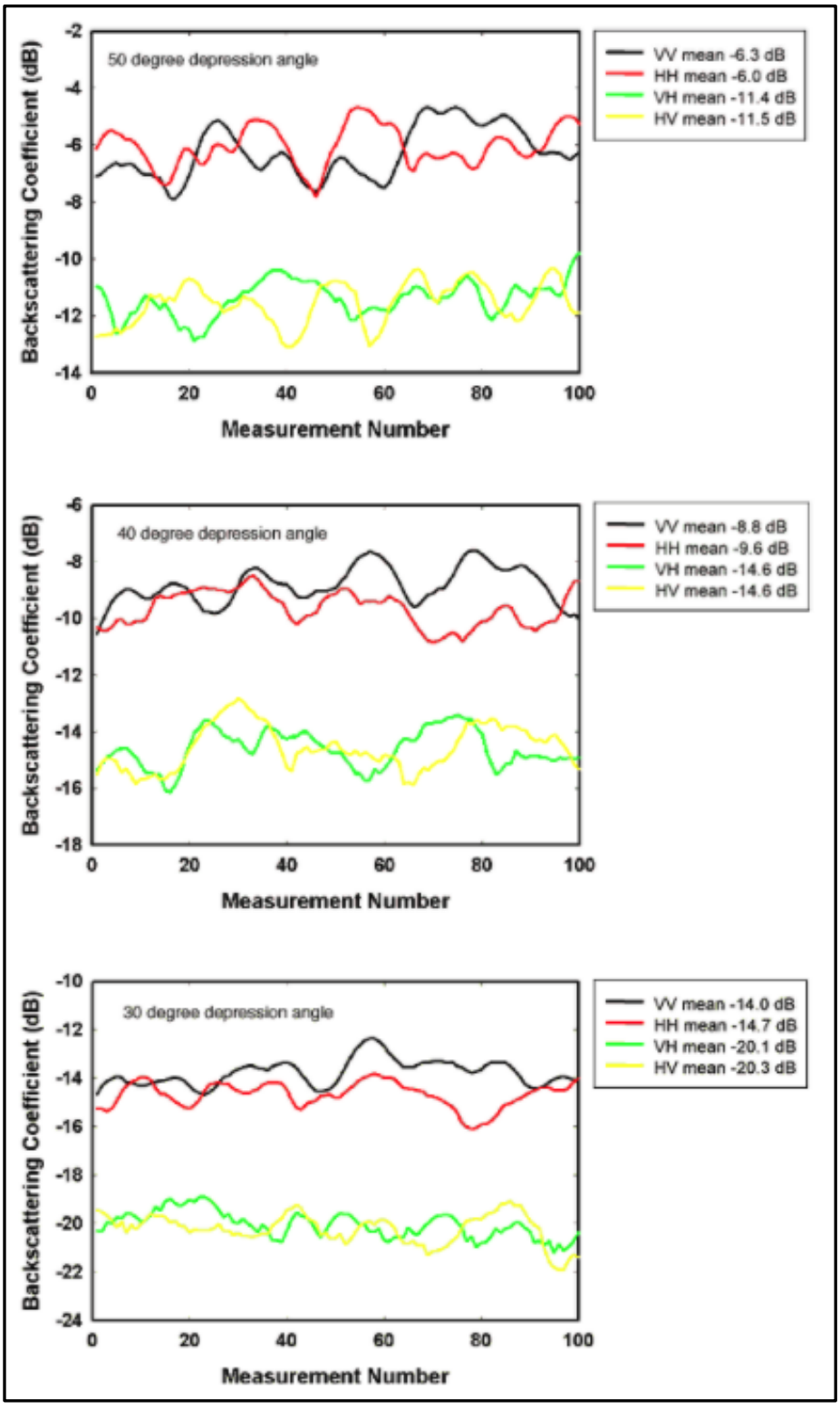

Figure 4. Ku-band FMCW radar polarimetric backscatter data from an 18' tower located near snow pit #1 at the LSOS, February 19, 2002.

1.4 FMCW Radar Profiles for February 21, 2002

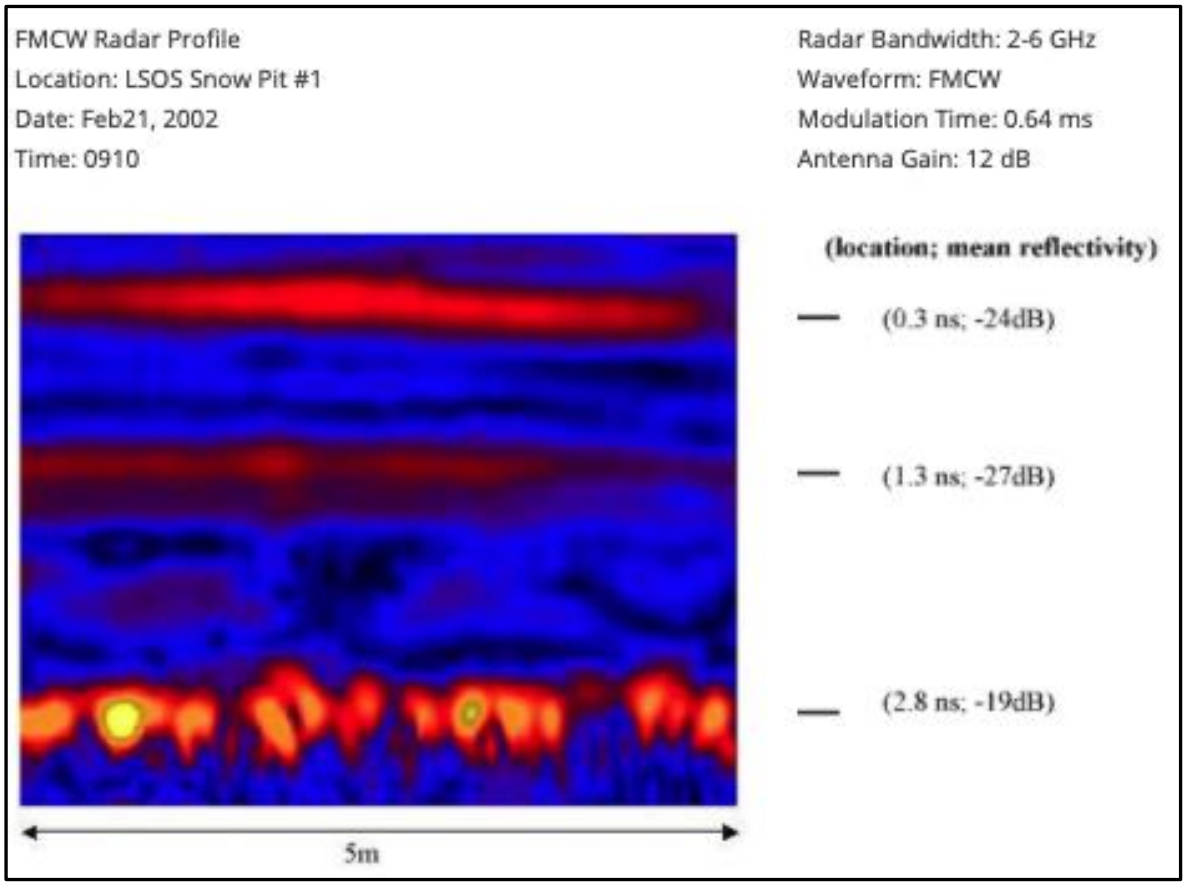

Figure 5. FMCW Radar Profile Location: LSOS Snow Pit #1 Date: Feb21, 2002 Time: 0910

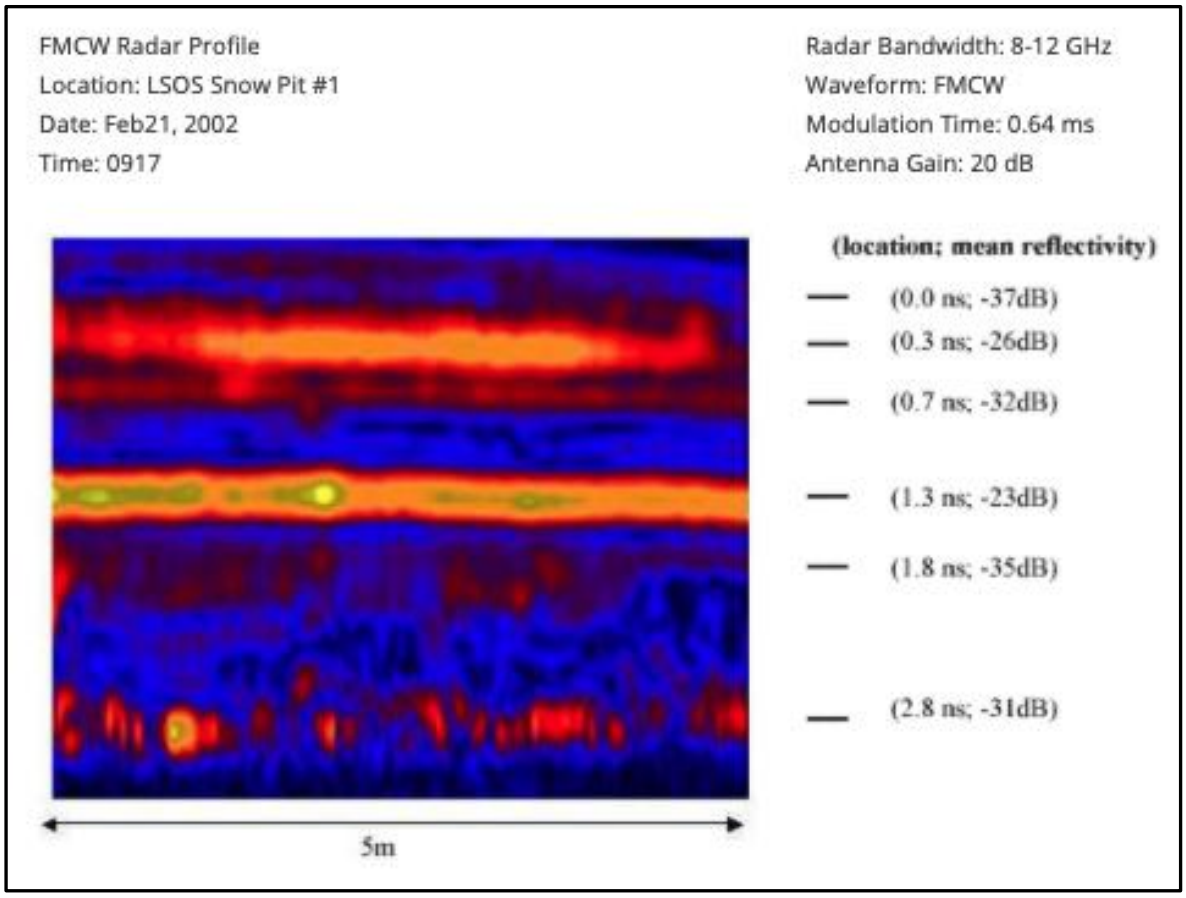

Figure 6. FMCW Radar Profile Location: LSOS Snow Pit #1 Date: Feb21, 2002 Time: 0917

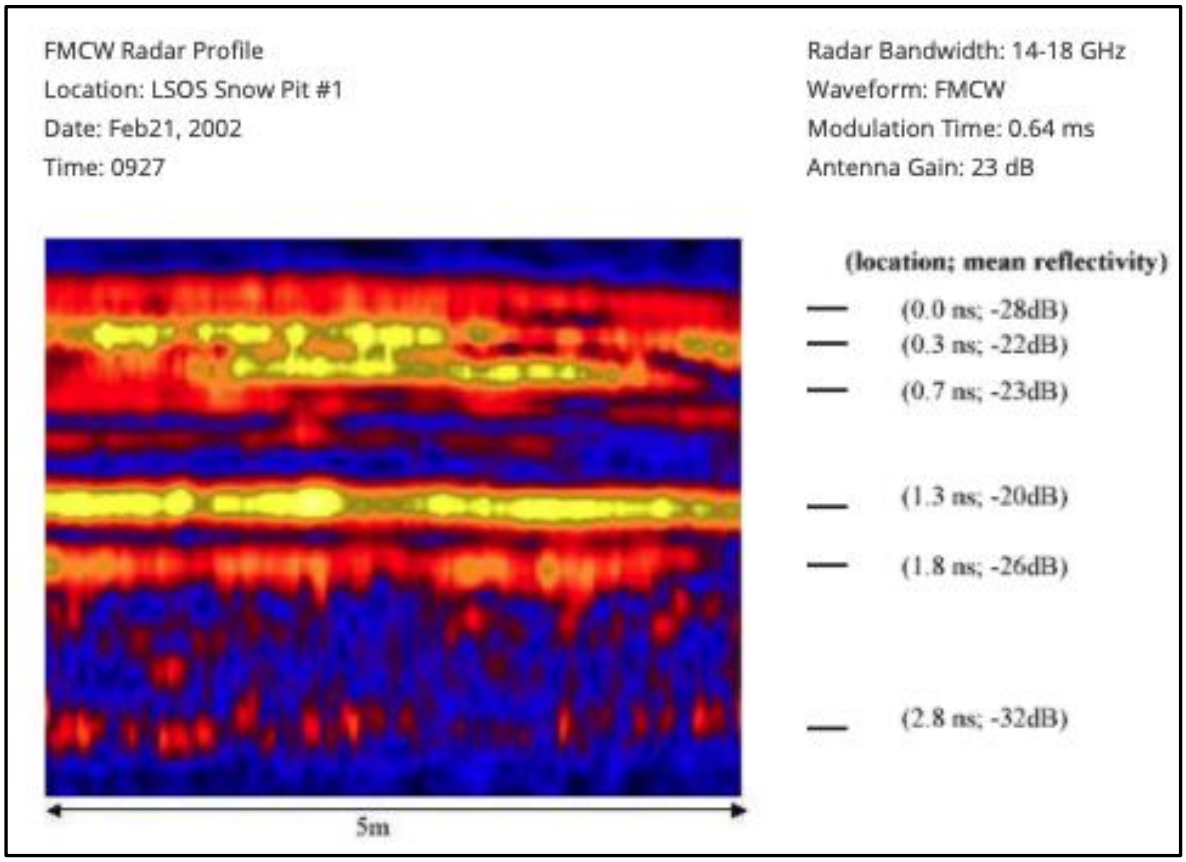

Figure 7. FMCW Radar Profile Location: LSOS Snow Pit #1 Date: Feb21, 2002 Time: 0927

1.5 Ku-Band FMCW Radar Polarimetric Backscatter for February 21, 2002

Ku-band FMCW radar polarimetric backscatter data from an 18' tower located near snow pit #1 at the LSOS

- Radar bandwidth 17-18 GHz
- Modulation Time: 64 ms
- Antenna: 25 dB standard gain
- Depression Angles: 50, 40, 30
- Feb. 21, 10:30-11:45

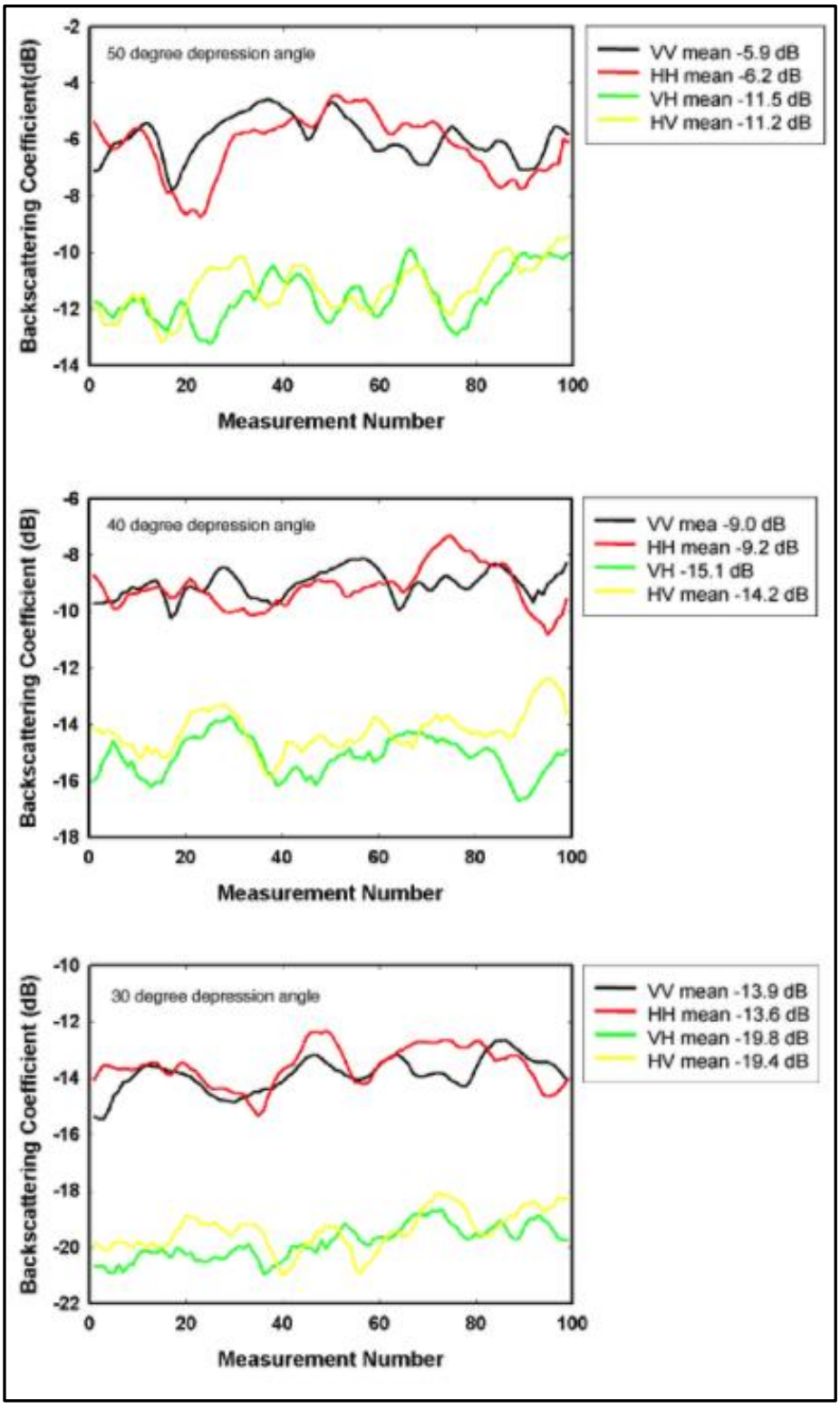

Figure 8. Ku-band FMCW radar polarimetric backscatter data from an 18' tower located near snow pit #1 at the LSOS, February 21, 2002.

1.6 FMCW Radar Profiles and Polarimetric Backscatter for March 25, 2002

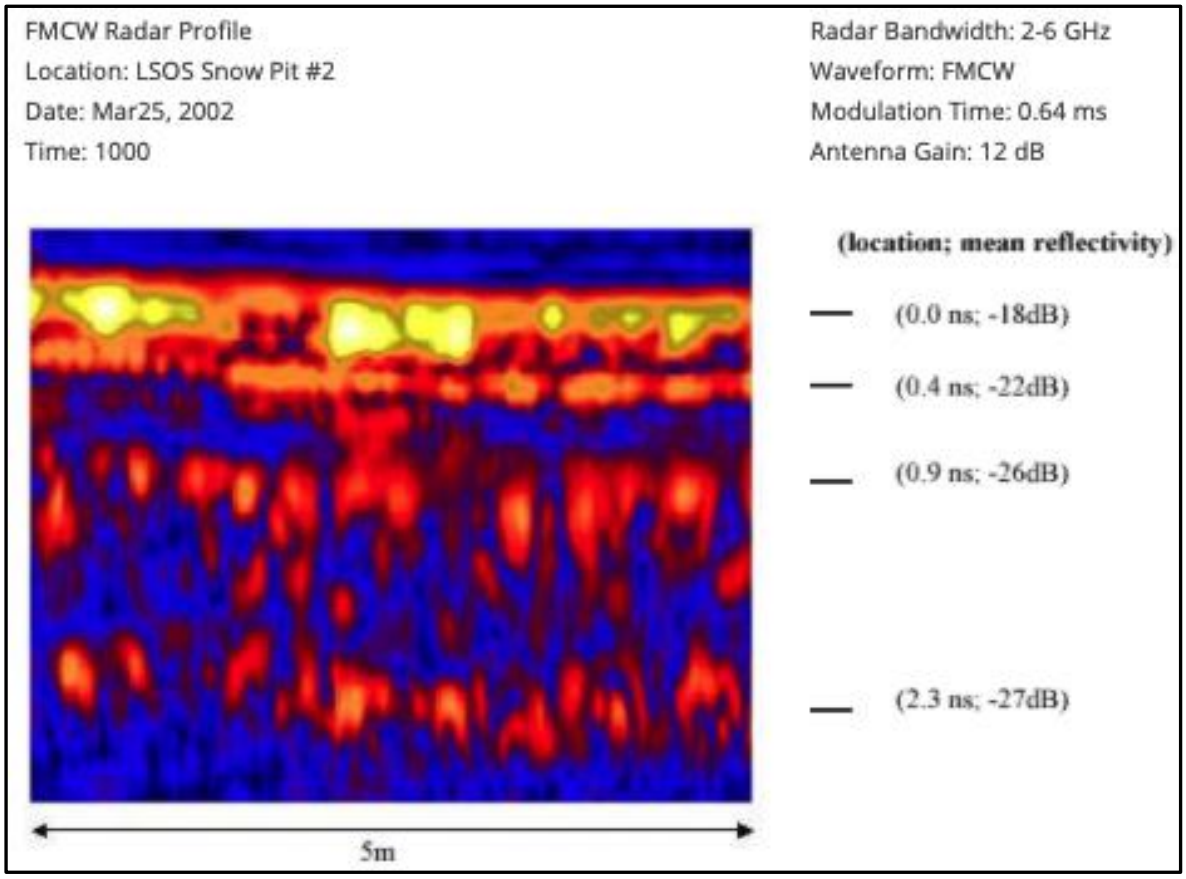

Figure 9. FMCW Radar Profile Location: LSOS Snow Pit #2 Date: Mar25, 2002 Time: 1000

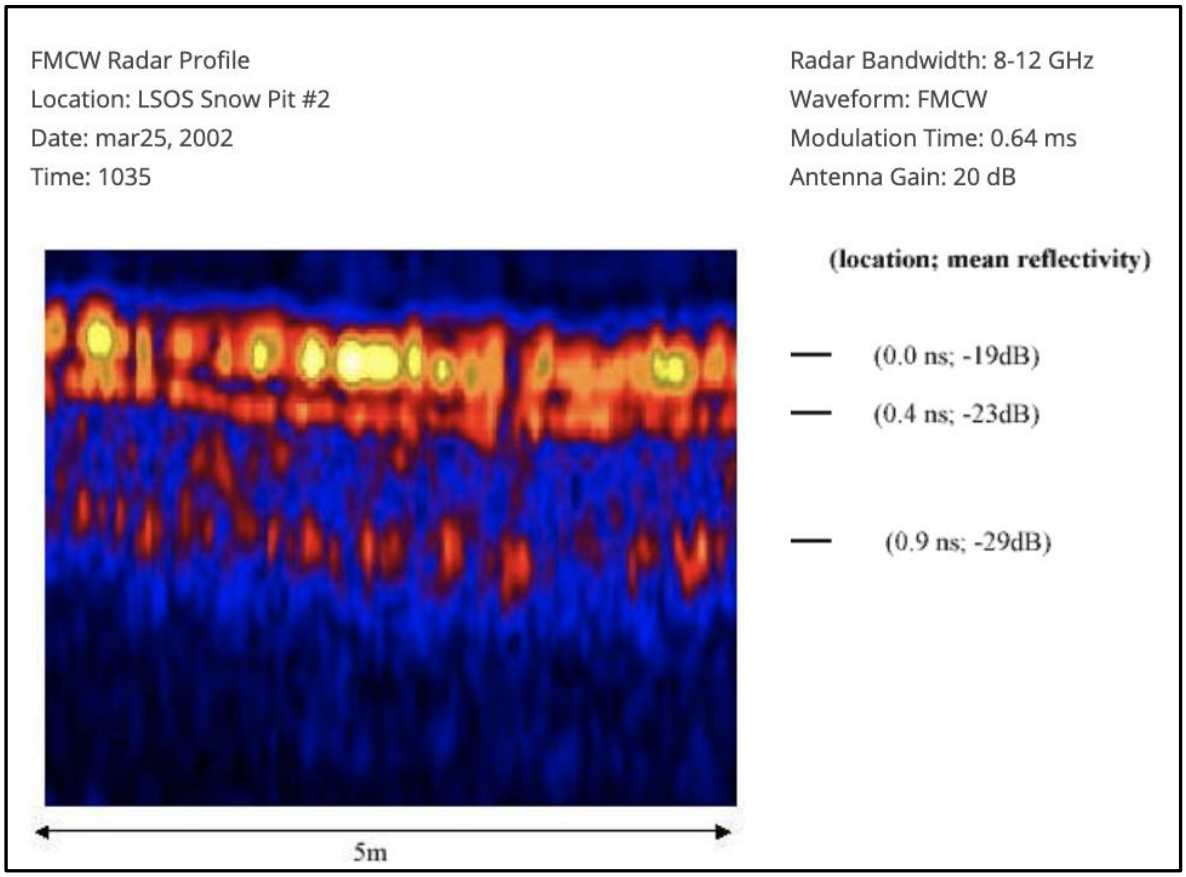

Figure 10. FMCW Radar Profile Location: LSOS Snow Pit #2 Date: Mar25, 2002 Time: 1035

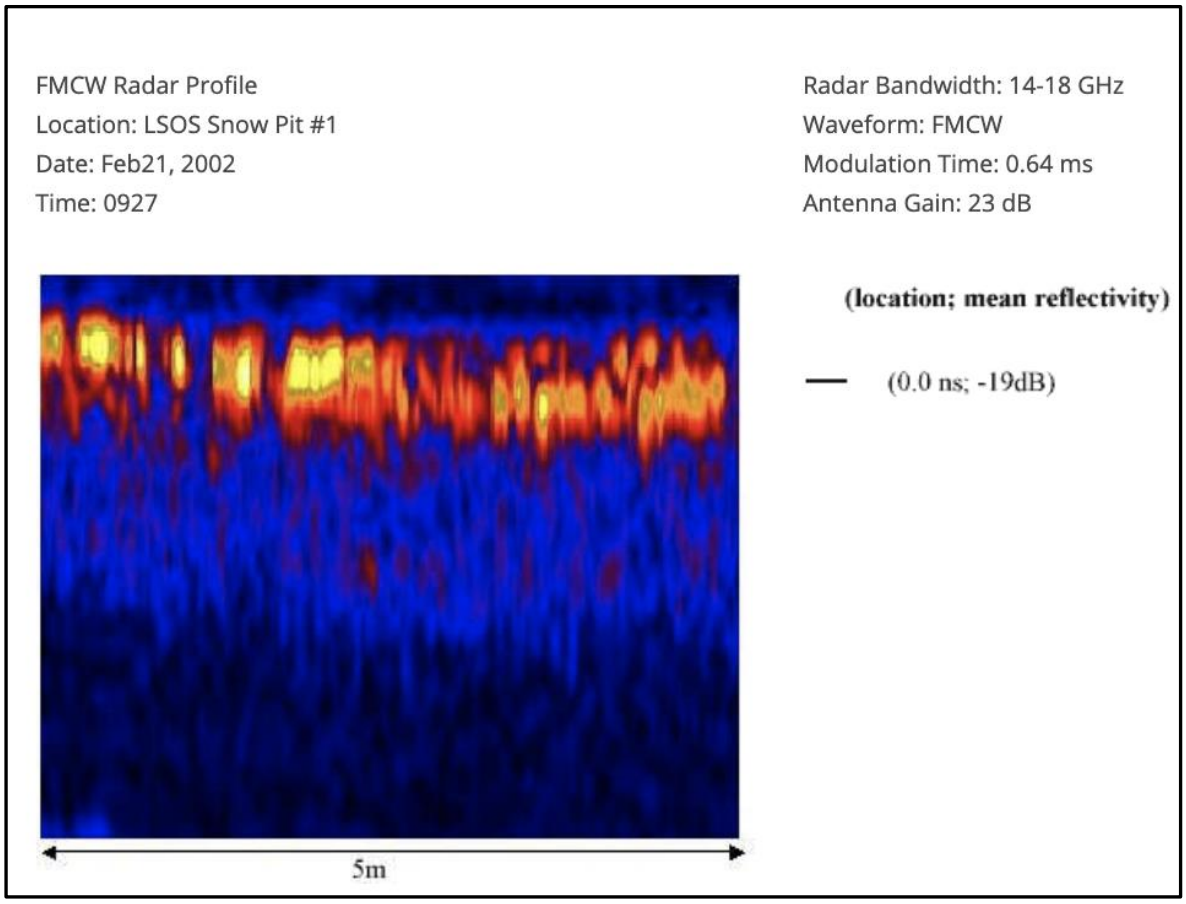

Figure 11. FMCW Radar Profile; Location: LSOS Snow Pit #1; Date: Feb21, 2002; Time: 0927

1.7 Ku-Band FMCW Radar Polarimetric Backscatter for March 25, 2002

Data not available

1.8 FMCW Radar Profiles and Polarimetric Backscatter for March 26, 2002

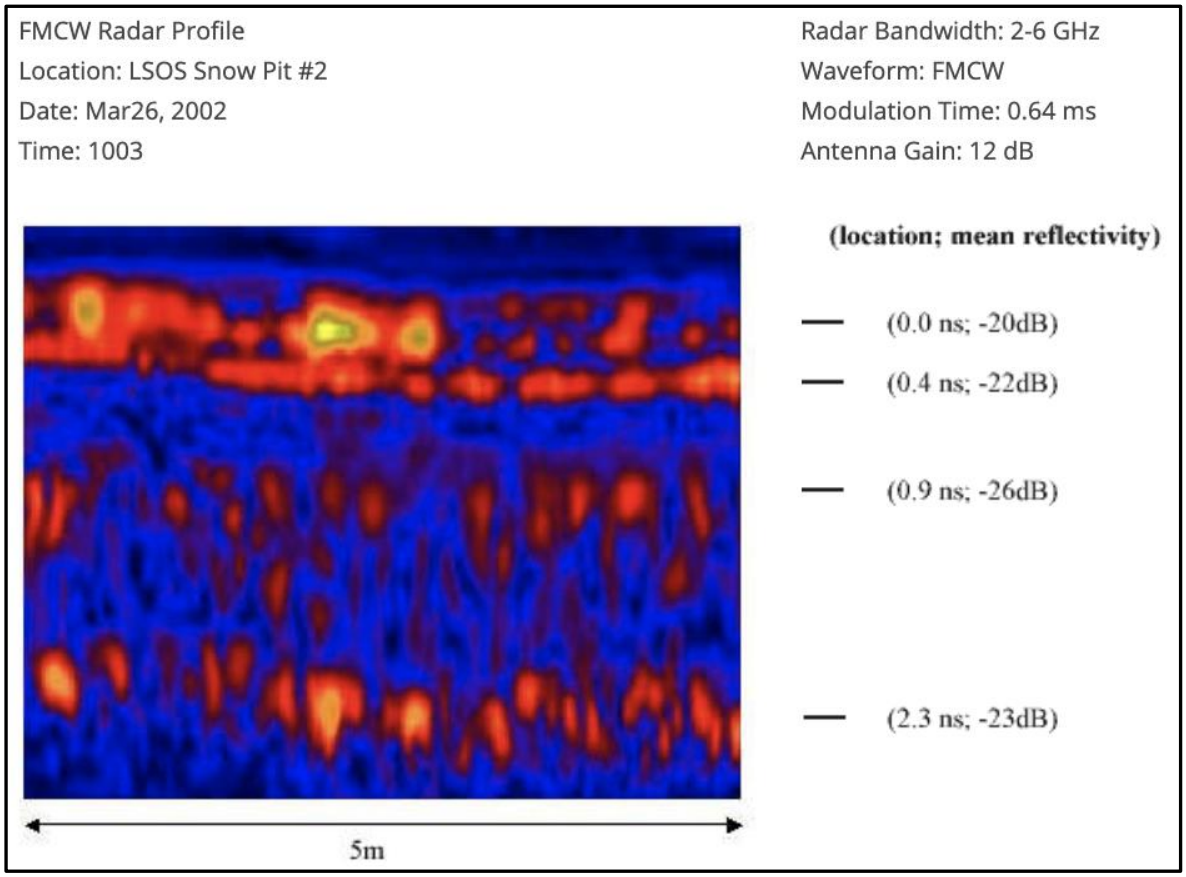

Figure 12. FMCW Radar Profile Location: LSOS Snow Pit #2 Date: Mar26, 2002 Time: 1003

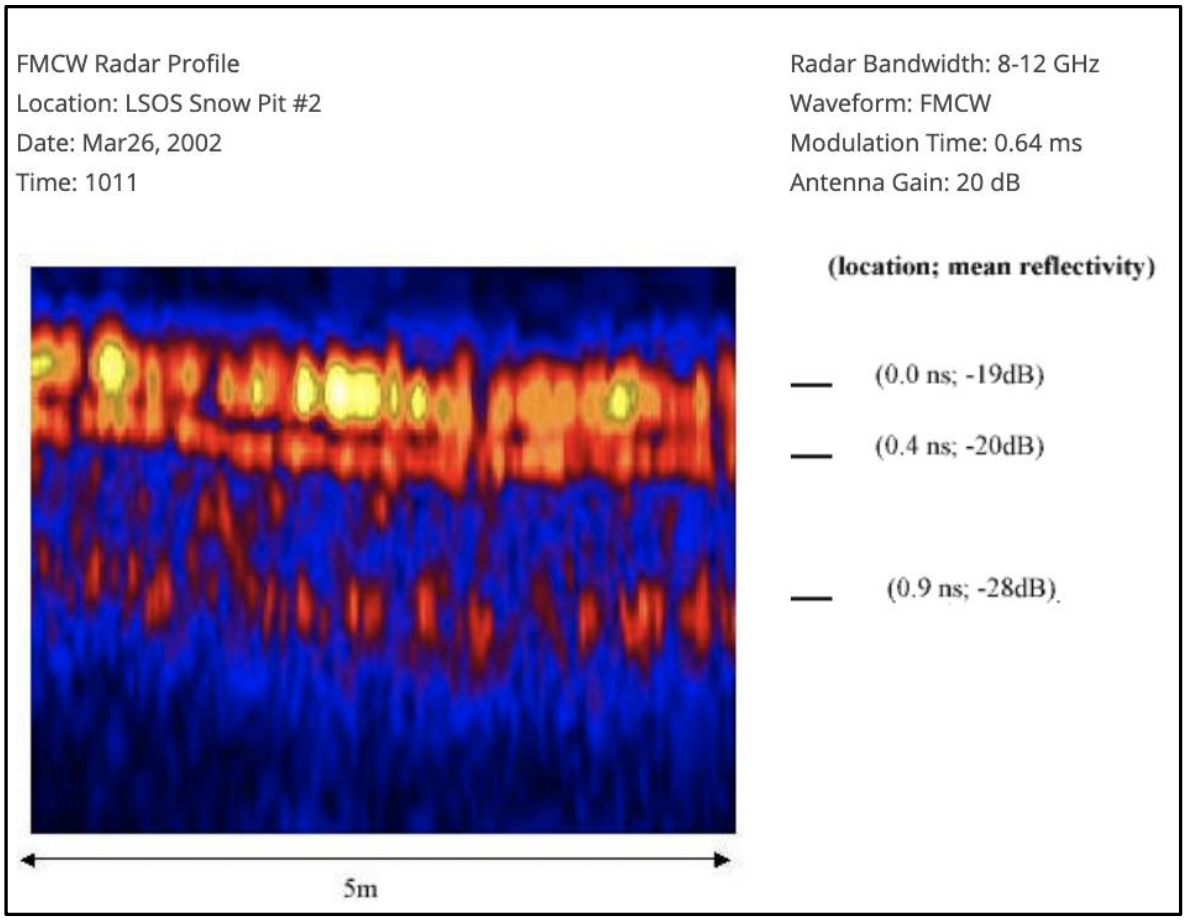

Figure 13. FMCW Radar Profile Location: LSOS Snow Pit #2 Date: Mar26, 2002 Time: 1011

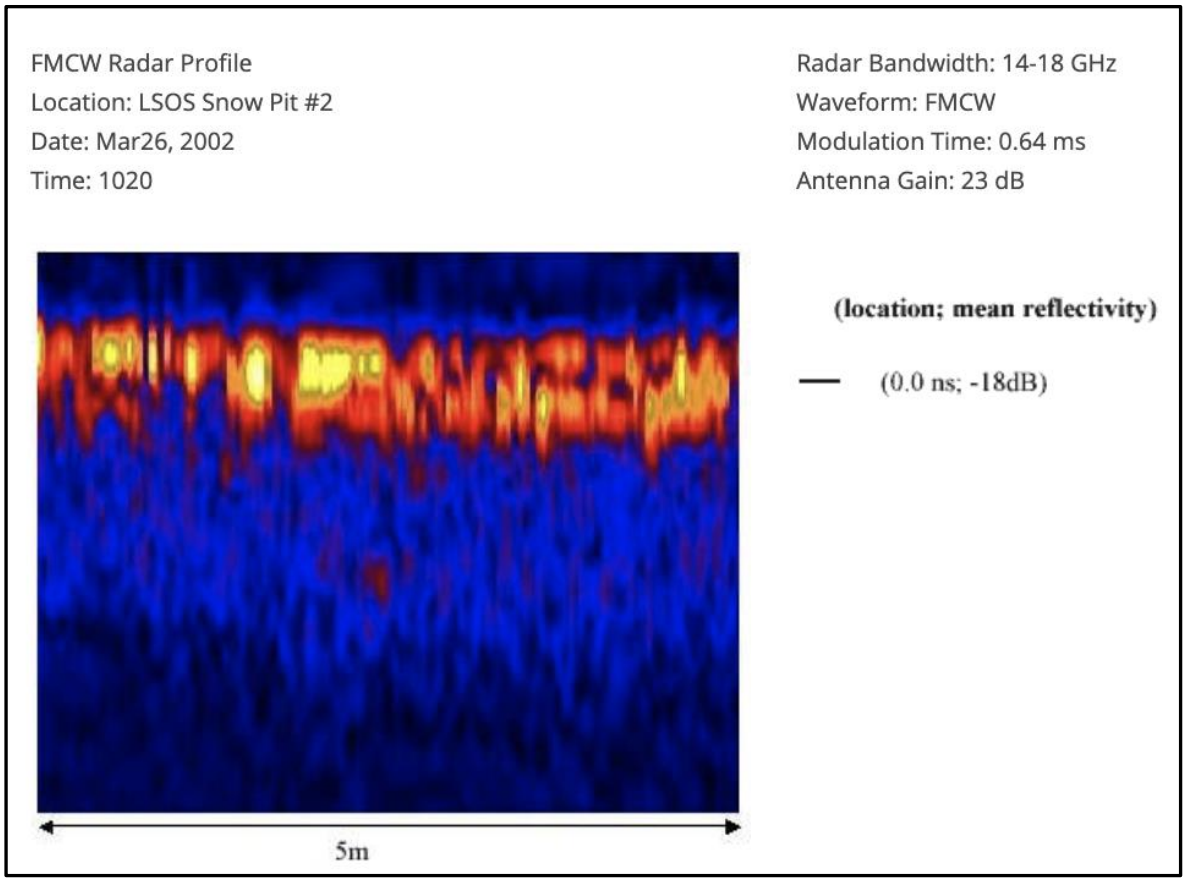

Figure 14. FMCW Radar Profile Location: LSOS Snow Pit #2 Date: Mar26, 2002 Time: 1020

1.9 KU-Band FMCW Radar Polarimetric Backscatter for March 26, 2002

Data Not Available

2 DOCUMENT INFORMATION

2.1 Publication Date

09 January 2015

2.2 Date Last Updated

16 April 2021