SABER L1B netCDF file contents

This document describes the contents of the SABER L1B files. The following table lists each variable contained in the netCDF file along with its type, dimensions, units, long name, and missing value. The L1B dimensioning variables are: Channel= 10, elevation:1401, pressure_nmc:64, vector: 3, str_len:6, event: UNLIMITED. The event dimension will depend on the number of events in the netCDF file. Note that there are several versions of the Level1B files: version 1.04 was used with Level2 data versions 1.06. 1.07 was used with data version 1.07, and 2.0 is used with data version 2.0.

Level 1B netcdf variables

variable(dimensions)/type*	Units	Long name	Missing value	Version**
ChannelName(channel,str_len)/c				04 07 20
sigma(channel)/f				04 07 20
event(event)/s		Event Number for Current File	-9	04 07 20
preEvent(event)/s		Previous event indicator	-9	04 07 20
date(event)/i		Date [yyyyddd]	2001100	04 07 20
mode(event)/s		Mode (0=Down 1=Up)	-9	04 07 20
tpDN(event)/s		Tangent Point Day/Night (0=Day 1=Night,2=terminator(85<solar zenith angle<95))	-9	04 07 20
tpAD(event)/s		Tangent Point Asc/Des (0=Ascending 1=Descending)	-9	04 07 20
offsetALT(event)/f	km	Altitude offset from Level2	0	04 07 20
twistAngle(event)/f	degrees	Residual Twist Angle	0	04 07 20
motionFactor(event)/f		Residual Motion Scale Factor	1	04 07 20
moonSepAngle(event)/f	degrees	Separation Angle(los & moon)	-999	04 07 20
tpaltmoonSepAngle(event)/f	km	Tp Altitude at Separation Angle	-999	04 07 20
solAP(event)/f		Solar Ap Index	-9	04 07 20
solKP(event)/f		Solar Kp Index	-9	04 07 20
solf10p7Daily(event)/f		F10.7 Flux (Daily	-999	04 07 20
solF10p781dAvg(event)/f		F10.7 Flux (81 day Average)	-999	04 07 20
solSpotNo(event)/s		Zurich Sunspot Number	-9	04 07 20
scSolarZen(event)/f	degrees	Sc solar zenith angle	-999	04 07 20
earth_sun(event)/f	km	Earth-Sun distance	-999	04 07 20
lunar_vector(event,elevation,vector)/f		Vector to center of moon from spacecraft	-999	04 07 20
pressure_nmc(event,pressure_nmc)/f	mbar	NMC pressure at TP	-999	04 07 20
temperature_nmc(event,pressure_nmc)/f	K	NMC temperature at TP	-999	04 07 20
geopotential_height_nmc(event,pressure_nmc)/f	km	NMC Geopotential Height		04 07 20
time(event,elevation)/i	msec	Time since midnight (UT)	-999	04 07 20

sclatitude(event, elevation)/f	degrees(N)	Spacecraft latitude	-999	04 07 20
sclongitude(event, elevation)/f	degrees(E)	Spacecraft longitude	-999	04 07 20
scaltitude(event, elevation)/f	km	Spacecraft altitude	-999	04 07 20
tplatitude(event, elevation)/f	degrees	Tangent point latitude	-999	04 07 20
tplongitude(event, elevation)/f	degrees	Tangent point longitude	-999	04 07 20
tpaltitude(event, elevation)/f	km	Tangent point altitude		04 07 20
tpSolarZen(event, elevation)/f	degrees	Tangent point Solar Zenith Angle	-999	04 07 20
tpSolarLT(event, elevation)/f	msec	Tangent point local solar time***	-999	04 07 20
elevation(event, elevation)/d	milliradian	Elevation Angle	-9999	04 07 20
scanAng(event, elevation)/d	milliradian	Mirror Scan Angle	-999	04 07 20
Rad(event, elevation, channel)/f	Watts/m2/sr	Calibrated Radiance	-999	04 07 20
scattitude(event, elevation, vector)/f	degrees	Spacecraft attitude vector	-999	04 07 20
maxRate(event)/f	degrees/sec	Maximum scan rate		04 07 20
timeMaxRate(event)/i	msec	Time corresponds to maximum scan rate		04 07 20
angleMaxRate(event)/f	degrees	Angle corresponds to maximum scan rate		04 07 20
qaRelaxationCorr(event, channel, vector)/f		QA for Relaxation Correction in Corrected Radiance	-999	04 07 20
qaRelaxationPctg(event, channel, vector)/f		QA for Relaxation Correction in Percent Total Radiance	-999	04 07 20
qaScatterCorr(event, channel, vector)/f		QA for Scatter Correction in Corrected Radiance	-999	04 07 20
qaScatterPctg(event, channel, vector)/f		QA for Scatter Correction in Percent Total Radiance	-999	04 07 20
tplatdeltaA(event, elevation)/f	degrees	Tangent Point Latitude Gradient Near Side	-999	20
tplondeltaA(event, elevation)/f	degrees	Tangent Point Longitude Gradient Near Side	-999	20
tplatdeltaB(event, elevation)/f	degrees	Tangent Point Latitude Gradient Far Side	-999	20
tplondeltaB(event, elevation)/f	degrees	Tangent Point Longitude Gradient Far Side	-999	20
perGreatArc(event)/f	degrees	Tangent Point Gradient Great Arc Change	-999	20

* f=float, d=double, s=short, i=int, c=char
** 04=1.04, 07=1.07, 20=2.0, RED means data unfilled for that version.
*** Description in Level1B files stating UT for this variable is incorrect