FORTE Photodiode Detector Database, Main Structure

TAG	TYPE	DESCRIPTION
es	4-byte integer	Event time in number of whole UT seconds since 00-UT, 1-Jan-1980
finetime	4-byte float	Event time fractional seconds (microsecond precision)
pddstatus	1-byte	PDD configuration status word (compressed SOH)
thresh	1-byte	PDD threshold/2 in A/D counts
noise	2-byte integer	PDD noise value in A/D counts; noise/thresh = multiplier
class	1-byte	Event characterization. 0 = possible lightning; 1 = noise; 2 = particle
lat	2-byte integer	FORTE subsatellite point north latitude*10
lon	2-byte integer	FORTE subsatellite point east longitude*10
alt	4-byte float	FORTE altitude (meters)
maxv	4-byte float	Maximum pulse irradiance in Watts/sq. meter at sensor
coef	fltarr(11)	Coefficients of 10th order polynomial fit to pulse. Prior to fit, pulse is 3-pt smoothed with idl function smooth.pro.
fiterror	4-byte float	Error in 10th order fit. i.e., standard deviation of resulting fit in microwatts/sq meter.
intsig	4-byte float	Value of integrated pulse over record length. Joules/sq. meter at sensor.
filedate	4-byte integer	Date associated with OLS file containing event (e.g., 19990101)
filetime	4-byte integer	Time associated with OLS file containing event (e.g., 011345)
nth	2-byte integer	Record number of event within OLS file
rf	idl structure	Substructure containing information regarding associated RF events. See definition.
nldn	idl structure	Substructure containing information regarding associated NLDN events. See definition.
lls	idl structure	Substructure containing information regarding associated LLS events. See definition.
status	idl structure	Substructure containing information regarding the PDD configuration for this event. See definition.

FORTE Photodiode Detector Database, NLDN substructure

TAG	TYPE	DESCRIPTION (**NLDN events must have temporal and FOV coincidence)
num	1-byte	Number of NLDN events found to be associated within 30-milliseconds of current PDD event (value range: 0-5)
lag	intarr(5)	Array of offsets of NLDN event times relative to TOF-corrected PDD event time in micoseconds (first num values valid)
lat	intarr(5)	North latitudes of NLDN events*10 (first num values valid)
lon	intarr(5)	East longitudes of NLDN events*10 (first num values valid)
sig	lonarr(5)	NLDN signal strength*10. SIG/50. = estimated vertical current in kiloamperes. Zero is a valid value. (first num values valid)
type	intarr(5)	NLDN event type. 1=CG, 2=IC. (first num values valid)

FORTE Photodiode Detector Database, RF substructure

TAG	TYPE	DESCRIPTION (**RF events only have temporal coincidence)
num	1-byte	Number of FORTE RF events associated within 20-milliseconds of current PDD event (closest events have priority)
lag	intarr(5)	Array of offsets of RF event times relative to PDD event time in microseconds
filedate	lonarr(5)	DAS file date (e.g., 19990101)
filetime	lonarr(5)	DAS file time (e.g., 011345)
nth	lonarr(5)	DAS file record number

FORTE Photodiode Detector Database, LLS substructure

TAG	TYPE	DESCRIPTION
num	1-byte	Number of FORTE LLS pixel triggers occurring in associated LLS event
trigtime	1-byte integer	Offset of LLS event time relative to PDD event time in microseconds (LLS event must occur within 32-ms of PDD event)
lat	intarr(10)	North latitude*10 of active pixels (first num valid)
lon	intarr(10)	East longitude*10 of active pixels (first num valid)
nth	1-byte integer	OLS file record number (assumes that LLS event occurs within same OLS file as PDD event)

FORTE Photodiode Detector Database, Status substructure

TAG	TYPE	DESCRIPTION
trigsrc	1-byte	PDD trigger source. 0=internal, 1=LLS, 2=DAS, 3=test
trigsrcstr	string	Descriptor for trigsrc
comprate	1-byte	PDD compensation rate. 0=fastest, 1=fast, 2=slow, 3=slowest
compratestr	string	Descriptor for comprate
electoptstim	1-byte	PDD test stimulus. Valid only if trigsrc=3. 0=electrical, 1=optical.
electoptstimstr	string	Descriptor for electoptstim
stepramp	1-byte	PDD test stimulus mode. Valid only if trigsrc=3. 0=step, 1=ramp.
steprampstr	string	Descriptor for stepramp
stimslowfast	1-byte	PDD test stimulus rate. Valid only if trigsrc=3. 0=slow, 1=fast.
stimslowfaststr	string	Descriptor for stimslowfast.
nightday	1-byte	PDD compensation mode. 0=night, 1=day.
nightdaystr	string	Descriptor for nightday.