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Subject: systime to date

Posted by [J.D. Smith](#) on Sat, 19 Sep 1998 07:00:00 GMT

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A while ago I recall seeing a discussion on converting between systime(1) type numbers and a calendar date. I recently had to do this myself (systime(1)'s are a very convenient time/date stamp for various purposes), and I thought I'd contribute my result, to fulfill my neglected newgroup duty. The procedure requires the NASA Astro procedure DAYCNV, but nothing else.

JD

```
;+
; NAME: st2date
;
; PURPOSE: Convert systime(1) type elapsed seconds to calendar dates.
;
; CALLING SEQUENCE: st2date, st, yr,mn,day,hr,min,sec,WDAY=wday,MON=mon,
;   FORM=form
;
; INPUTS:
; st: The double number of seconds since Jan 1,1970 (as returned
;   by systime(1)).
;
; OPTIONAL OUTPUTS: (all outputs optional)
; yr: The year
; mn: The month
; day: The day of the month
; hr: The hour of the day
; min: The minute
; sec: The second, including fractional part.
; KEYWORDS:
; WDAY=wday: The day of the week, abbreviated as a string of length 3
; MON=mon: The month, abbreviated as a string of length 3
; FORM=form: The entire date formatted as in systime(0)
;
; MODIFICATION HISTORY:
; 9/19/98: Written, JDS
;
; PROCEDURES: DAYCNV (from the NASA Astro package.)
;
; NOTES: The date returned by systime(1) may or may not be in UT,
; depending on the operating system.
;-
```

```
pro st2date, st,yr,mn,day,hr,min,sec,WDAY=wday,MON=mon,FORM=form
  on_error,2
  if size(st,/TYPE) ne 5 then begin
```

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    message,'Input systime must be of type double.'
    return
endif
days=st/86400.0D      ;convert seconds to days.
jd=days+2440587.5D   ;add julian date of Jan. 1,1970, 0.0h
daycnv, jd, yr, mn, day, hr
min=(hr-floor(hr))*60.0D
sec=(min-floor(min))*60.0D
hr=floor(hr)
min=floor(min)

;; find the calendar day -- midnight-midnight, not noon-noon (add .5)
wday=(['Sun','Mon','Tue','Wed','Thu','Fri','Sat'])[floor((jd +1.5) mod 7)]
mon=(['Jan','Feb','Mar','Apr','May','Jun','Jul','Aug','Sep', 'Oct','Nov', '$
      'Dec'])[mn-1]

if arg_present(form) then $
  form=string(FORMAT='(A3," ",A3," ",I2," ",2(I2.2,":"),I2.2," ",I4)', $
             wday,mon,day,hr,min,floor(sec),yr)
end

```

## File Attachments

1) [st2date.pro](#), downloaded 105 times

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