

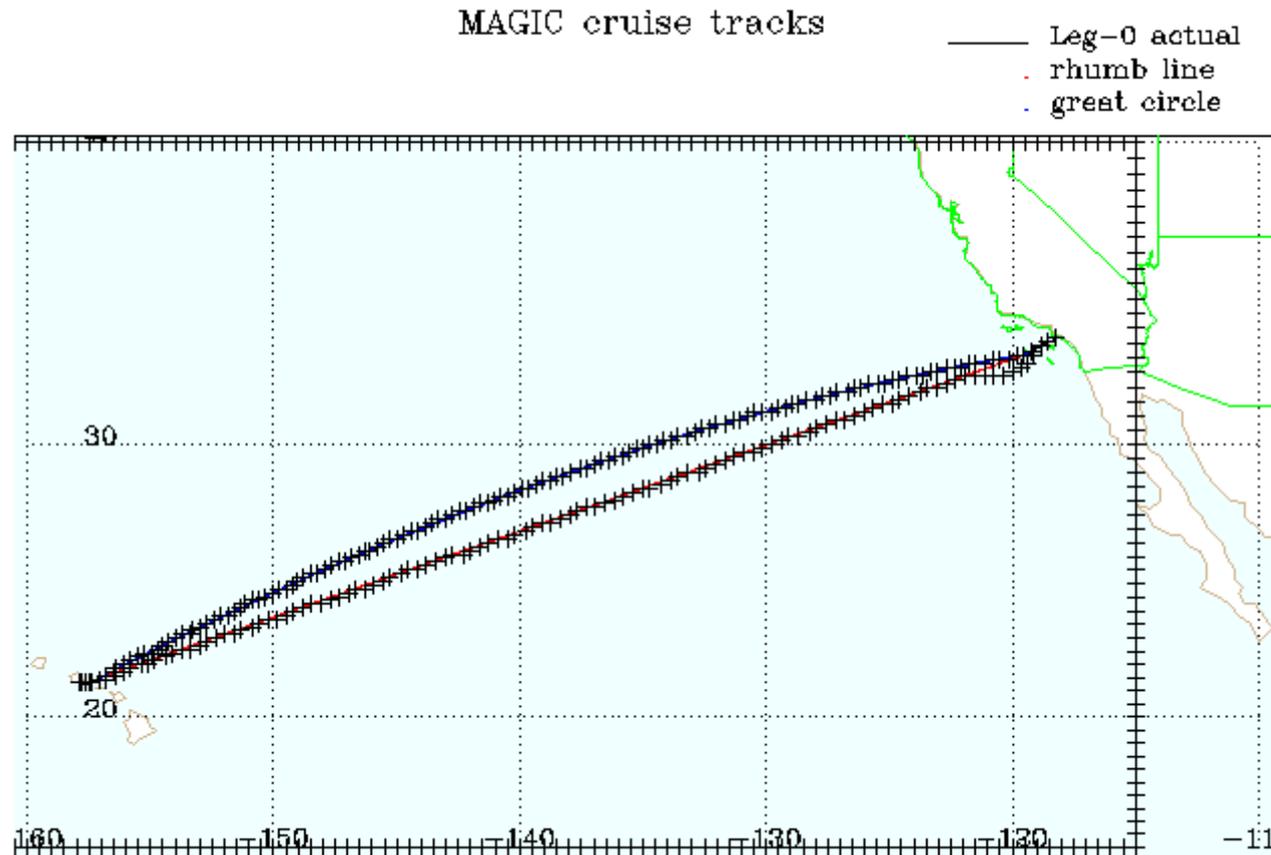
ECMWF Data Products for MAGIC

Richard Wagener, XDC
originator: Maike Ahlgrimm, ECMWF

Background

- ECMWF DIAG
 - Regular XDC data-products for each site
 - 1 or 2 single columns derived from ECMWF model
 - 24 hourly forecast steps T0+12h through T0+35h
 - 6 separate data-products:
 - flx = rad. fluxes(layers)
 - ten = tendencies: $\partial/\partial t$ u,v,T,q (layers)
 - var = p,u,v,T,q,l,ia,R,w (layers)
 - sfc1l = surf. fluxes (lat. & sens. heat, SW, LW, rain, snow)
 - sfcml = sub-surface (4 layers), temp., moisture fluxes
 - sfce = extra surface params: albedo, T, q, u, v, evap.

MAGIC conundrum



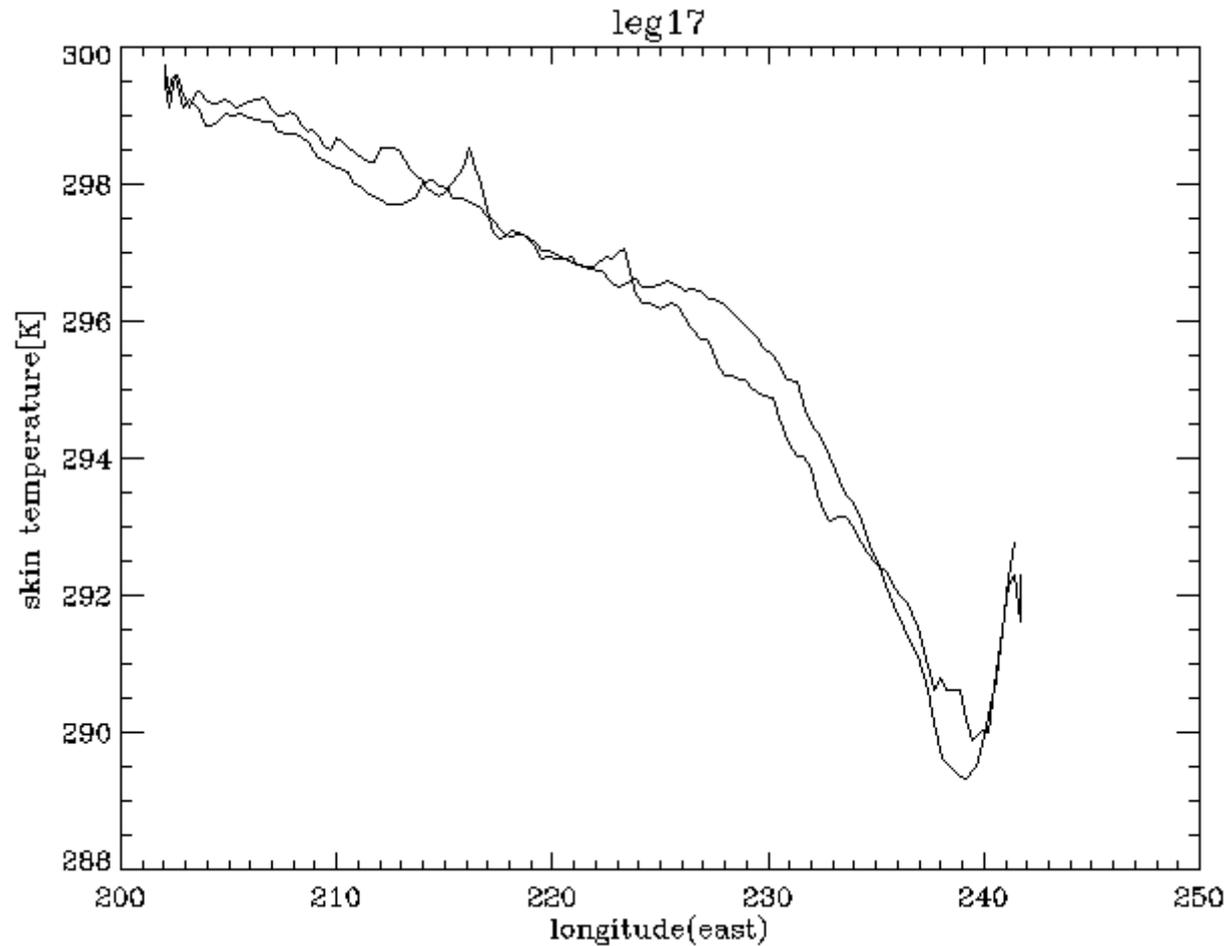
ECMWF Grid Products

- 1st solution: create gridded products:
 - limited to 0.5 deg grid
 - flx = vertically integrated only
 - var = full 3D 91 levels: u,v,w,q,T
 - sfc = surface vars: rad/heat/moisture fluxes, precip. etc.

ECMWF Along-Track 2D

- 2nd solution, nearest neighbour along track/time
 - identified by time and leg number (19)
 - all in 1 .nc file, 58 levels
 - utc,lon,lat as function of time
 - fluxes only integrated or surface
 - u,v,w,q,T (layer).

Sample Var Skin Temperature



Where's the data?

- Since the MAGECMWF data products deviate substantially from the regular ECMWF DIAG, they are treated as FC data:
- <http://iop.archive.arm.gov/arm-iop/2012/mag/magic/wagener-ecmwf/>
- and because of the size they have to be ordered by email to armarchive@arm.gov