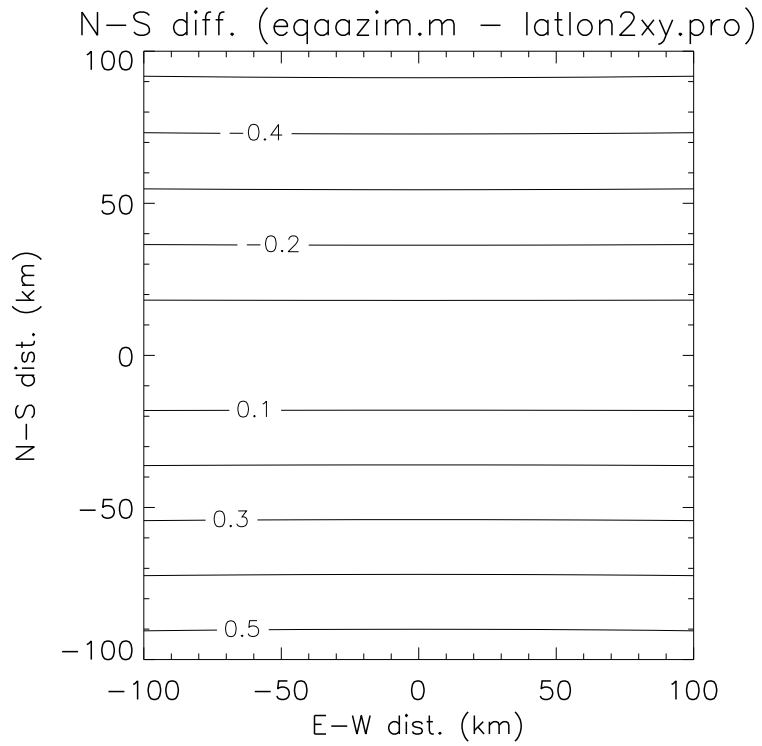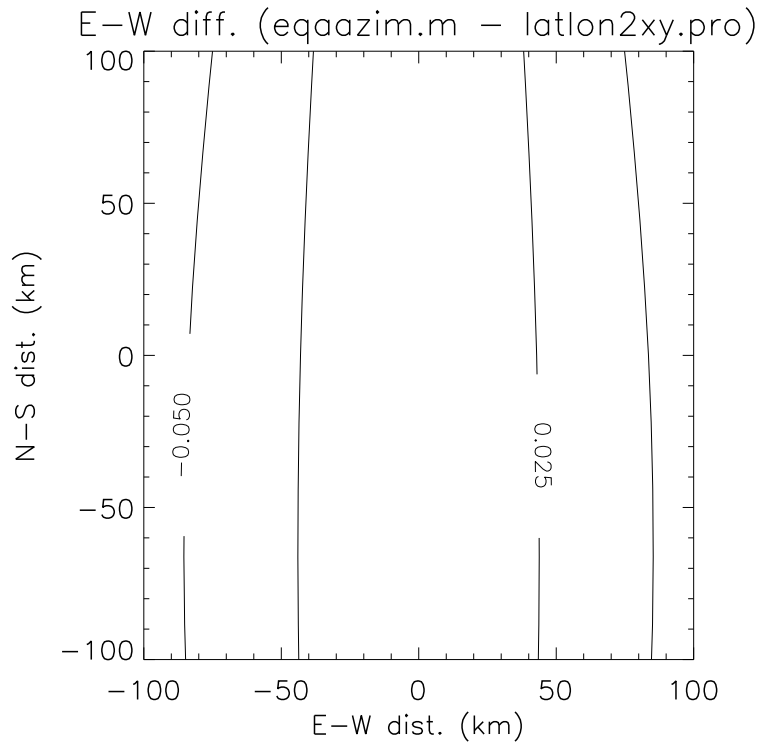.

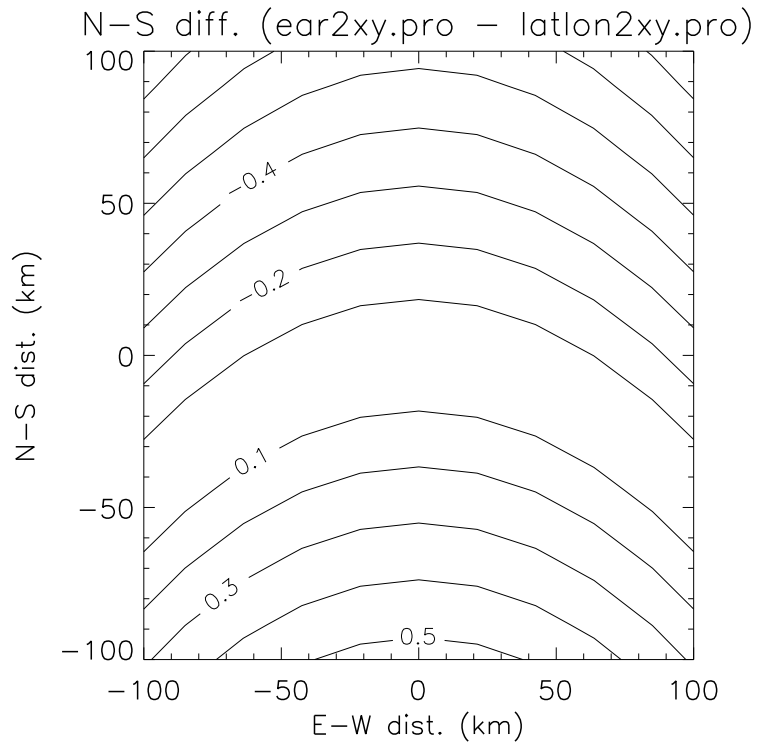# Co-location of aircraft and radar data.

see report on //www-das.uwyo.edu/~vali/rico/rico.html for
explanation; only the figures are included here
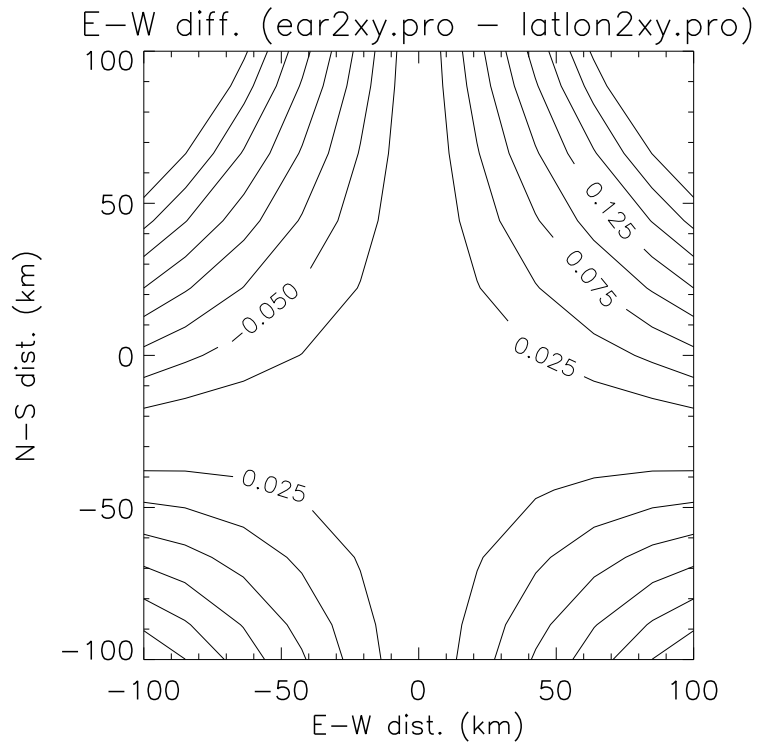
E−W diff. (eqaazim.m − latlon2xy.pro)

N−S diff. (eqaazim.m − latlon2xy.pro)

axes refer to position from eqaazim (xlab,ylab)

E–W diff. (ear2xy.pro – latlon2xy.pro)

N–S diff. (ear2xy.pro – latlon2xy.pro)

axes refer to position from ear2xy

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E−W diff. (eqaazim.m − ear2xy.pro)

N−S diff. (eqaazim.m − ear2xy.pro)

axes refer to position from eqaazim (xlab,ylab)

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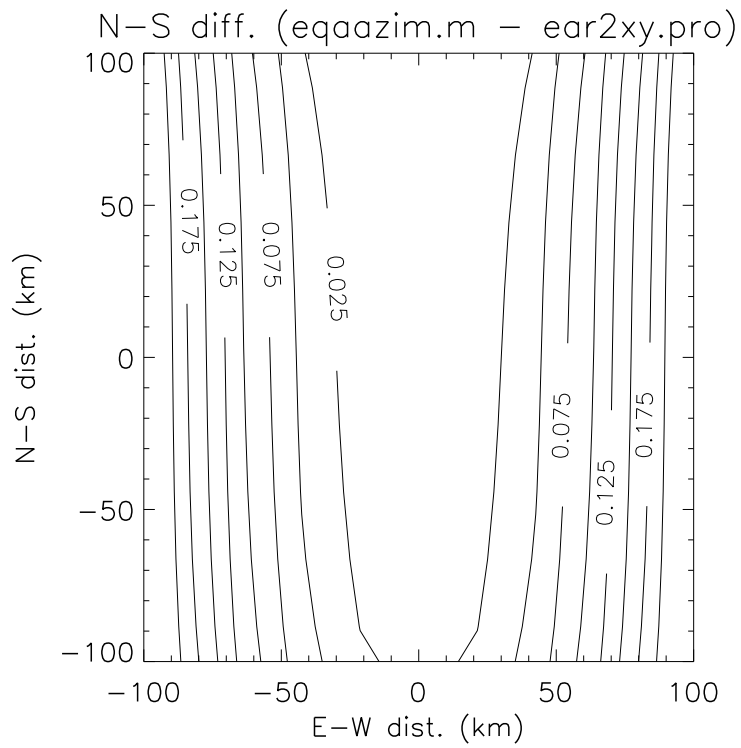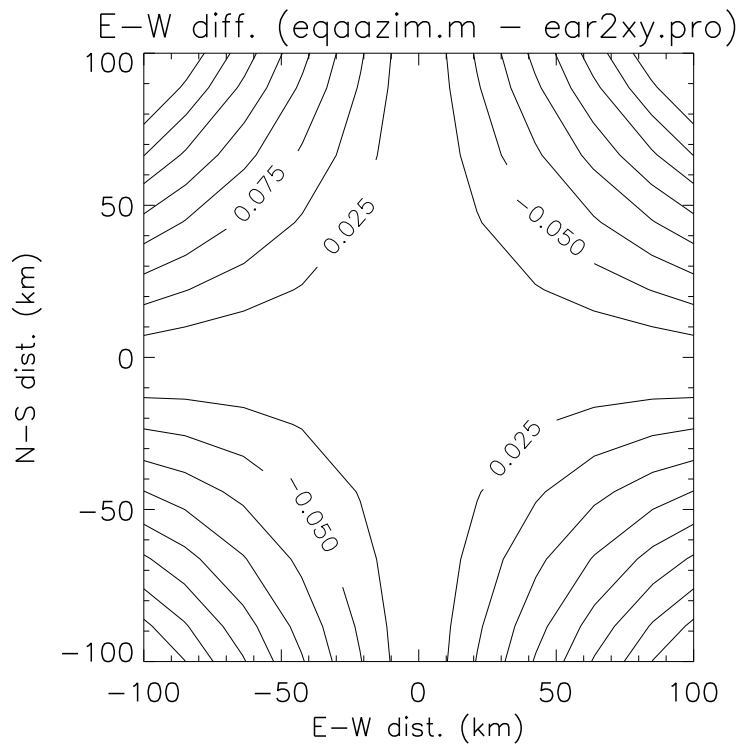
Comparison of position data for King Air 'hits' during 20041213 flight   50622

		measured		calculated (km)	
			solo-ii/latlon2xy	eqaazim	ear2xy
20:37:51 UTC	**KA GPS (note 1)**				
	lat	18.1442			
	lon	-61.9730			
	xpos		-15.73	**-15.73**	**-15.76**
	ypos		59.74	**59.41**	**59.42**
	SPol via solo-ii (note 2)				
	lat		18.1395		
	lon		-61.9716		
	xpos ± 0.84 (note 4)	**-15.62**		-15.64	-15.67
	ypos ± 0.29	**59.25**		58.94	58.95
20:39:46 UTC	**KA GPS (note 1)**				
	lat	18.1454			
	lon	-61.9754			
	xpos		-15.98	**-15.99**	**-16.02**
	ypos		59.87	**59.54**	**59.54**
	SPol via solo-ii (note2)				
	lat		18.1409		
	lon		-61.9746		
	xpos ± 0.86	**-15.94**		-15.85	-15.88
	ypos ± 0.36	**59.38**		59.16	59.17

note 1: King Air GPS data taken from 1-Hz file, reading a single value without smoothing

note 2: for hit at 20:37:51, using data from one of the two (the Eastern one) pixels with equal reflectivity (36 dBZ)

for hit at 20:39:46, using center of four adjacent pixels (33, 37, 41, 46 dBZ)

note 3: using the difference between the GPS and SPol values via 'ear2xy'

note 4: radar pixel size is 0.8° in azimuth and 0.15 km in range