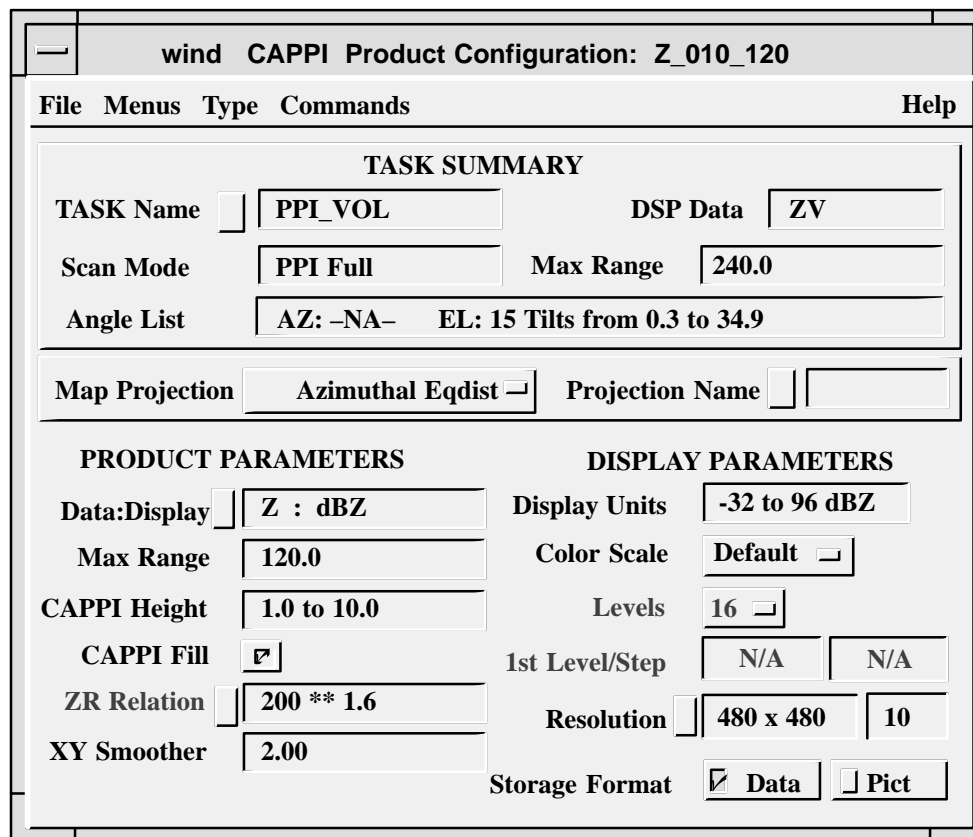


## 2.4 CAPPI: Constant Altitude Plan Position Indicator



TASK SUMMARY	
TASK Name	PPI_VOL
DSP Data	ZV
Scan Mode	PPI Full
Max Range	240.0
Angle List	AZ: -NA- EL: 15 Tilts from 0.3 to 34.9

Map Projection	
Azimuthal Eqdist	Projection Name

PRODUCT PARAMETERS		DISPLAY PARAMETERS	
Data:Display	Z : dBZ	Display Units	-32 to 96 dBZ
Max Range	120.0	Color Scale	Default
CAPPI Height	1.0 to 10.0	Levels	16
CAPPI Fill	<input checked="" type="checkbox"/>	1st Level/Step	N/A
ZR Relation	200 ** 1.6	Resolution	480 x 480
XY Smoother	2.00		10
		Storage Format	<input checked="" type="checkbox"/> Data <input type="checkbox"/> Pict

This section describes the fields of the Product Configuration menu that are unique to CAPPI products. For general information, see these other sections of this chapter:

- Task Summary area, Section 2.1.1.
- Map Projection Area, Section 2.1.2
- Product Parameters, see Section 2.1.3.
- Display Parameters area, Section 2.1.4.

CAPPI stands for Constant Altitude PPI. A CAPPI is a horizontal cut through the atmosphere, therefore, it requires a PPI volume scan at multiple elevation angles. The number of angles and their spacing depends on the range and height of the CAPPI you want to produce. Refer to the discussion of constructing volume scans in Section 2.1.1.

The CAPPI product also supports calculation of SHEAR data. The configuration options are the same as the SHEAR product, with choices of radial, azimuthal, and elevation shear.

### To open the CAPPI Product Configuration menu:

Choose **Type**→**CAPPI** from the menu bar.

## **Data : Display**

Specify the data type you wish to make a CAPPI for. Essentially all IRIS data types are available. If you wish to generate rainrate, then you can select which input data type is used for the conversion. We support a Z/R relationship, as well as a KDP/R relationship.

## **CAPPI Height**

Specify the height of the CAPPI surface in kilometers and tenths of kilometers. The IRIS CAPPI algorithm constructs CAPPIs by interpolating in height and range to the selected CAPPI surface. An intermediate product in cylindrical coordinates (CAPPI height, surface range and azimuth) is produced first, followed by the final conversion to Cartesian coordinates for the display. Enter a range of numbers for a 3-D CAPPI.

## **CAPPI Fill**

The interpolation algorithm requires that for each point in the output product image, there be an elevation angle both above and below the selected height. For example, the volume scan in the sample CAPPI Product Configuration menu cannot produce a CAPPI at 5 km height for ranges less than 5 km because there is no angle higher than 5 km in this region. Similarly, if you pick a low-level CAPPI surface, the lowest elevation angle is higher than the surface at far ranges. The resulting product display shows these unsampled areas as black.

The CAPPI Fill field uses the highest elevation angle to fill the near ranges, and the lowest elevation angle to fill the far ranges, eliminating the black areas. This approach is also called "Pseudo CAPPI." This is not recommended for 3-D CAPPIs.