Purpose:
This is the readme file for FAPAR product, produced by MEDIAS-France, from POLDER-1 and POLDER-2 data delivered by CNES.

Date:
This file was created on 8th July, 2005.

Parameters name:
Daily FAPAR

Physical Definition:
FAPAR is defined as the fraction of Photosynthetically Active Radiation absorbed by the vegetation for photosynthesis activity.

Unit: dimensionless

Physical range of the parameter values: [0, 1]

Sensor name: POLDER-1/ADEOS-1 and POLDER-2/ADEOS-2

Summary of the retrieval methodology:
The bi-directional POLDER reflectances are normalized using the linear reflectance model of Maignan et al.(2004). The inversion are carried out over a synthesis period of 30 days with a sliding window of 10 days. More details on the algorithm can be found on the scientific POLDER website (http://smsc.cnes.fr/POLDER/SCIEPROD/lsp2algol3.htm). The retrieved directional coefficients are used to calculate the Renormalized Difference Vegetation Index (RDVI) in an angular configuration which reduces the soil effects. The daily FAPAR is assessed from the RDVI using the linear relationship proposed by Roujean and Bréon (1995).

References:
Maignan, F. F.M. Bréon, et R. Lacaze, Bidirectional reflectance of Earth targets : evaluation of analytical models using a large set of spaceborne measurements with emphasis on the hot spot, Remote Sensing of Environment, 90, 210-220, 2004.
Roujean, J.L. and F.M. Bréon, Estimating PAR absorbed by vegetation from bi-directional reflectance measurements, Remote Sensing of Environment, 51, 375-384, 1995.

Summary of the validation procedure: These products are not yet validated.

Accuracy of the parameter (in physical unit):

Product format:
Raw binary (little Endian)

Data encoding (for binary files): Data are coding on 4 bytes floating point
* special values:
255: no data
254: undefined
253: overflow (retrieved value larger than the maximum limit of the physical range)
252: underflow (retrieved value lower than the minimum limit of the physical range)

Time coverage: POLDER-1
* beginning: November 1996

* end: June 1997
Time coverage: POLDER-2
* beginning: April 2003
* end: October 2003

Time resolution: 10-days (Synthesis centered on 5th, 15th and 25th of each month)

Spatial coverage of the product: global

Spatial resolution: 1/12°

Projection: Standard full resolution POLDER grid
* type of projection: Sinusoïdal
* projection parameters:
length of the ellipsoid minor axis: 6356752.3141
length of the ellipsoid major axis: 6378137.0000
* ellipsoïd of reference: GRS 1980

Point of contact:
* name: Roselyne Lacaze
* institution: POSTEL/MEDIAS-France
* email address: roselyne.lacaze@medias.cnes.fr
* phone number: 33 - 5 - 61 - 27 - 31 - 21