

	<b>Operation Change Request</b>		OCR No: 028
			Issue: A
Title: Improve limb and nadir coverage for Cabauw Dandelions-2 Campaign			
<u>Description of Request:</u> During Sep 1 – Sep 30, 2006, a validation campaign aimed at satellite and groundbased observations of total ozone and total NO <sub>2</sub> will be performed at Cabauw, the Netherlands (51.971 °N, 4.972 °E).  In order to get additional SCIAMACHY data, we request that SCIAMACHY mission planning is adjusted such that maximum coverage of limb as well as nadir states over Cabauw is achieved. This can be done in a similar fashion to what was done previously for the SAUNA and Dandelions-1 campaigns.			
Originator: E.J. Brinksma/KNMI	Date of Issue: 31-7-2006	Signature: via e-mail 31-7-2006	
<u>Assessment of SSAG (necessary for requests by scientists):</u> From SSAG point of view the implementation of the OCR (maximum coverage of Cabauw) is recommended.			
SSAG: H. Bovensmann	Date: 14-8-2006	Signature: e-mail, 14-8-2006, H. Bovensmann	
Classification of OCR: D			
<u>OCR Analysis (incl. Implementation Option):</u> This OCR is implemented in a way similar to OCR no. 23 and 24, i.e. SOST will run the planning process twice. If Cabauw coverage orbits do not show a nadir state over this site, the planned limb/nadir sequence will be exchanged by using the timeline with the opposite limb/nadir sequence. This gives a high probability for Cabauw nadir coverage which is, due to the limb/nadir matching, equivalent to limb coverage. The only minor drawback is that such orbits modify the sequence 1 / sequence 2 pattern of nadir and limb states.			
SOST: M. Gottwald, DLR-IMF (ESA, Industry if necessary)	Date: 01/08/2006	Signature: via e-mail 01/08/2006	
<u>Approval of Proposed Implementation:</u>			
Originator Approval: E.J. Brinksma/KNMI	Date: 21-8-2006	Signature: via e-mail 21-8-2006	
SSAG Approval: H. Bovensmann	Date: 14.8.2006	Signature: via e-mail 14.8.2006	
<u>Decision / Approval:</u> OCR shall be implemented as proposed by DLR-IMF.			
DLR Approval: Ch. Chlebek	Date: 14.8.2006	Signature: 14.8.2006	
<u>Implementation by SOST:</u> In the OSDF for the period September 1 <sup>st</sup> – September 30 <sup>th</sup> the timelines in the Cabauw relevant orbits include the limb/nadir sequence which provides maximum coverage at Cabauw. This is ensured by having run SOST's simulation of the mission planning schedule twice, having identified cases where the sequence was unsuitable and exchanged the sequence by the opposite limb/nadir sequence. In total 25 orbits have been identified with fair to good Cabauw coverage. They are listed in the annex. On 5 days the subsatellite track is such that no Cabauw overpass occurs.  The planning for the period September 1 <sup>st</sup> – September 30 <sup>th</sup> has been updated accordingly (original OSDF 33_19 was sent to RGT end of July) on August 21 <sup>st</sup> by submitting the modified OSDF 33_20 to RGT.			
SOST: M. Gottwald, DLR-IMF	Date: 24/08/2006	Signature: via e-mail 24/08/2006	

<b>Orbits over Cabauw (Nadir Swath +/- 480 km)</b>		
<b>Time: 01-SEP-2006/30-SEP-2006</b>		
<b>Orbit</b>	<b>Longitude (ANX)</b>	<b>ANX (UTC)</b>
23552	177.6	01-SEP-2006 10:09:33
23566	185.5	02-SEP-2006 09:37:56
23595	176.2	04-SEP-2006 10:15:18
23609	184.1	05-SEP-2006 09:43:41
23623	192,0	06-SEP-2006 09:12:04
23638	174.7	07-SEP-2006 10:21:03
23652	182.6	08-SEP-2006 09:49:26
23666	190.6	09-SEP-2006 09:17:49
23681	173.3	10-SEP-2006 10:26:48
23695	181.2	11-SEP-2006 09:55:11
23709	189.1	12-SEP-2006 09:23:34
23738	179.8	14-SEP-2006 10:00:55
23752	187.7	15-SEP-2006 09:29:18
23781	178.3	17-SEP-2006 10:06:40
23795	186.2	18-SEP-2006 09:35:03
23824	176.9	20-SEP-2006 10:12:25
23838	184.8	21-SEP-2006 09:40:48
23852	192.7	22-SEP-2006 09:09:11
23867	175.5	23-SEP-2006 10:18:10
23881	183.4	24-SEP-2006 09:46:33
23895	191.3	25-SEP-2006 09:14:56
23910	174,0	26-SEP-2006 10:23:55
23924	181.9	27-SEP-2006 09:52:18
23938	189.8	28-SEP-2006 09:20:41
23967	180.5	30-SEP-2006 09:58:03

Table: ENVISAT orbits with nadir ground pixel coverage at Cabauw