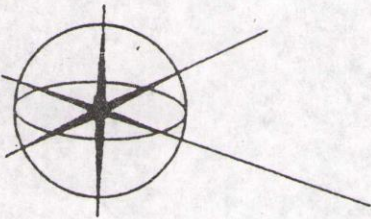


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IRAS

NEWSLETTER No.8

IRAS continues to operate very well and the survey is being carried out according to plan without any significant problems. On the present reckoning the lifetime should be about 340 days rather than the predicted 200 days at launch. The current UK Guest Observer Programme was designed for the shorter lifetime and it is now to be extended - the purpose of this news letter is to give details of the plans that are being considered to make best use of this extra time.

The nominal survey should be completed by September 7th and the satellite should continue to operate until the first days of January 1984. However, not all the time after the nominal survey is finished will be available for additional observations as some of this time will be used to do one further section of the sky to study variability after 6 months, small areas which have been missed must be surveyed and there are other calls on the time. In addition, from mid November onwards part of each orbit is in eclipse for up to 15 minutes which means that the fine sun sensors cannot be used to control the Satellite and the gyros, with consequent drift, have to be used. It was because of this problem that the orbit direction of IRAS was changed before launch to put the eclipse period towards the end of the mission. Decisions on what to do during eclipse periods have not yet been made.

The agreement regarding the UK Guest Observer programme is that it should have 10 percent of the remaining time for additional observations. This should amount to approximately the same amount of time as the programme had previously (i.e. after taking the factors mentioned in the previous paragraph into account).

The SERC are now inviting proposals for the use of IRAS during this time, with a closing date at the end of June (June 29th). As stated in the letter of the 9th May from SERC, a meeting will be held at the Rutherford Appleton Laboratory on the morning of June 15th (from 11am to 1pm, possibly continuing after lunch) to discuss the UK AO programme.

To make best use of the additional time it is important to learn from the experience of the first six months. The following paragraphs are relevant to this aim.

1. Guest Observers who have had time on IRAS for Additional Observations are being informed with this newsletter of how many of their observations have been done, how many missed and how many remain with a chance of being done. Those missed will not be automatically rescheduled and should be re-submitted (i.e. treated like bad weather on ground based telescopes).
2. Potential that IRAS has for making additional observations can be judged from:
 - (i) The circulars which are now being issued and published in Nature and Astronomy and Astrophysics;

- (ii) The performance of the IRAS detectors: the performance in flight of the Survey Detectors is similar to and in the case of the band 3 detectors considerably better than the values given in the Information Package. Unfortunately the detectors of the CPC ended up at too low a temperature with a resulting loss of performance. The current values of the NEFD are as follows:-

SURVEY	Band 1	8.5 to 15 μ m	0.07 Jy	
	Band 2	19 to 30 μ m	0.065 Jy	
	Band 3	40 to 80 μ m	0.085 Jy	at Survey Rate
	Band 4	83 to 120 μ m	0.3 Jy	
CPC	Both Channels (41 to 63, 84 to 114 μ m)			
			0.7 Jy for dwell time of 1 sec	

- (iii) AOs in your programme for which you have received the data (see 3 below).
3. It is appreciated that observers very much wish to see data from their observations. The earliest that data can start to be sent out will be end of May/ beginning of June and only at that time provided the processing centres are ready to release the data.
4. Chopped Photometric Channel (CPC) 50 and 100 μ m bands, 1.2 arc min resolution.

This paragraph is being devoted to the CPC to stress what the processing centre at Groningen (ROG) have always stated, that they will provide a Quick Look Facility at RAL soon after the observation but that the final processing will not be available until a year after the mission ends. Somehow people have come to think that the quick look data will differ little from the final product but this is just not true. A number of difficult corrections have got to be made, which include allowance for glitches which give spurious intensities and cause the filter to ring, a hysteresis effect which causes maps to have serious furrows depending on direction of scan and calibration which must include the effect of non-linearity at high intensities.

Until these corrections have been made, all that can be deduced from the output is whether or not the object has been "seen" and whether the final result should be successful.

(Output from AOs other than those made with the CPC will be provided by SDAS at JPL. This should be available in the UK a month or so after the observation has been made, the delay being dependent on the backlog built up while the processing was being verified.)

Note

Publications from UK AOs, past and future, will be as stated in the last newsletter (No. 7). Each UK programme was (and will be) considered relative to the AO programme of the IRAS science team. If it was unique it was classed as a non-duplicating programme, but if it was similar to one of the IRAS science team programmes it was classed as a duplicate and the most suitable observations were chosen. In the latter case the UK observer has to wait until after the first overall publication by the IRAS science team before he can publish his results but he receives the data as soon as possible and can start his analysis immediately. This restriction does not apply to non-duplicating programmes but for both types of programme the chairmen of the project wish to act as preliminary referees of the papers produced.

With this newsletter principal investigators will be sent updated details of AOs in their programme which they should distribute to their collaborators. (See 1 above)

As stated above, a meeting for UK observers will be held on June 15th at Rutherford Appleton Laboratory from 11.00 to 13.00 hrs, continuing after lunch if necessary. It will be held in the Lecture Theatre adjacent to the restaurant.

Agenda will include :

1. Explanation of CPC output
2. Proposals - explanation and forum for questions
3. Starlink. Common UK computer programs.

NEXT ROUND OF PROPOSALS

A list of those proposals awarded AO time at the last round is attached. Proposals for the next round may be either :

- a. those submitted for the first round, whether or not they were given time. If you wish your existing proposal to be reconsidered, please telex or write to Carol Armstrong or Colin Lovell at SERC Swindon.
- b. Completely new proposals. If you indicated when replying to the questionnaire from SERC that you wished to receive application forms for AO time, these will be sent to you together with explanatory notes and a list of recommended macros. Further application forms can be obtained from Mr C P LOVELL at SERC SWINDON.

CLOSING DATE - 29 JUNE 1983.

R E Jennings
May 1983

IRAS AO PROGRAMMES AWARDED IN THE FIRST ROUND

NON-DUPLICATE PROGRAMMES

Ref No

2	Gilmore	- Deep Fields	18 AO's
7	Hartquist	- High Velocity HI (with 94)	10 AO's
13	Hill	- Hydrogen Deficient Stars (+ collab 20,36)	20 AO's
30	Ellis	- Complete sample nearby galaxies	30 AO's
31	Willis	- Far IR monitoring HD 50896	10 AO's
38, 39	Evans	- Far IR Variability T Tauri Stars	25 AO's
55	Meadows	- Asteroids	10 AO's
83	Evans	- Recent X-Galactic supernovae	5 AO's
96	Whitmore	- ISM towards stars, with diffuse bands	10 AO's
104	Barlow	- Dust in PN Magellanic Cloud	7 AO's

DUPLICATE PROGRAMMES

Ref No

1	Smith	- Optically selected quasars	
3	Fabian	- High Pressure Star Formation	
16	Longair	- Powerful radio galaxies	
17, 18			
19	Impey	- BL LAC, Radio Ellipticals, strong mm (+ 108)	
26	Ellis & Gondhalekar	- NGC 4449	
27	Ward	- Unusual Seyferts, active galaxies	
28	Bath	- X-ray binaries (+ Collab 5 + Collab 37)	
40, 41	Evans	- SNR in LMC, Classical Novae	
60	Harris	- Bi-Polar Nebulae	
67	Emerson	- Deep Survey Cold Dark Clouds	
68	Ade	- Bi-Polar Outflow	
69	Mitchell	- PMS in Chamaeleon and Lupus	
71	White	- PN Shells	
72, 73	Rowan-Robinson	- Deep Sky Maps (Collab 2) Mapping Galaxies (Collab 14,87)	
75	Emerson	- Globules and Cold Dark Clouds	
80	Fairclough	- Far IR at High Red Shift	
86	Whitmore	- Active Galaxies	
90	Glencross	- Circulstellar around Late Type (with 64)	
93	Jennings & Moorwood	- Radio Galaxies	
95	Furniss	- IR from Galactic Non Thermal (with 78)	
97	Cudlip	- Hot centred clouds (with 8,29,34,82,89)	
98	Scheuer	- Cygnus A	
100	Joseph	- Interacting Galaxies	
102	Barlow	- Vega and Sirius	
103	Barlow	- Stellar Winds from OB's (with 32)	
105	Zarnecki	- Comets	
91	Jennings	- Targets of opportunity	