FORMAT FOR THE INSTRUMENTER INPUT TO THE ACTIVITY PLAN (IAP)

The IAP will be in the keyword format only. (Fixed format is no longer used)
Note that the keywords as listed below can be specified in any order. However, they must be used as described, and they are case sensitive.

SCIPLAN

The SCIPLAN entry specifies the first level of science planning information, i.e. the overall plan as developed during the weekly and daily science planning meetings. The xyz field which follows SCIPLAN_ should be descriptive of a specific science plan. It can be up to 10 alphanumeric characters long, no blanks embedded, but underscores are allowed. This field will be used to specify the occurence of Joint Operations Procedures (JOP). For example, SCIPLAN_JOP_3. All fields described as "strings" contain a maximum of 50 alphanumeric characters, blanks, commas and underscores being allowed.

SCIPLAN_xyz

STARTTIME=	Start time of the special activity
ENDTIME=	End time of the special activity
INSTRUME=	Instrument or group implementing the planned activity
SCI_OBJ=	Scientific objective, e.g. "Bright Point Studies". (1)
SCI_SPEC=	(Optional). More specific scientific objective, e.g. "Density Profile". (1)
OBJECT=	Generic name for the object planned to be observed, from a limited list of possible objects, e.g., "Bright point". (1)
OBJ_ID=	(Optional). Unique identifier for the object to be observed. Up to 6 alphanumeric characters, no blank embedded, e.g. BP
NOTES=	(Optional). May include references to specific studies or rasters to be run. (1) (2)
PROG_ID=	(Optional). An ID number specifying that this observation is part of a continuing series. Up to 6 numeric characters.
CMP_NO=	(Optional). ID number of the coordinated observing program this observation supports. Up to 6 numeric characters.
DISTURB=	(Optional). Description of any possible disturbances. (1).
DATE_MOD=	(OPtional). Last date modified.

Notes :
(1) String.
(2) This field can be repeated if necessary.

PROGRAM

The PROGRAM entry is used to describe the specific programs that the instruments would run to satisfy the scientific objectives of the corresponding SCIPLAN activity: for each SCIPLAN entry, there will be a sequence of PROGRAM entries that represent the details of the SCIPLAN. The _xyz which follows PROGRAM is the name of the activity that the instrumenter provides. It can be up to 10 alphanumeric characters long, with no embedded blanks, but underscores are allowed.

PROGRAM_xyz

STARTTIME=	Start time of the special activity
ENDTIME=	End time of the special activity
INSTRUME=	Instrument or group implementing the planned activity
OBS_PROG=	The observing program that will be run
SCI_OBJ=	Scientific objective, e.g. "Bright Point Studies". (1)
SCI_SPEC=	(Optional). More specific scientific objective, e.g. "Density Profile". (1)
OBJECT=	Generic name for the object planned to be observed, from list of possible objects. (1)
OBJ_ID=	(Optional). Unique identifier for the object to be observed. Up to 6 characters.
XCEN=	Center of the instrument field-of-view along the solar X-axis. (2) (3)
YCEN=	Center of the instrument field-of-view along the solar Y-axis. (2) (3)
ANGLE=	Rotation angle of vertical axis of instrument field-of-view relative to solar north. (2) (3)

IXWIDTH=	Maximum width of the instrument field-of-view in the instrument X axis, i.e. the direction perpendicular to the vertical axis as used in keyword ANGLE. (2) (3)
IYWIDTH=	Maximum width of the instrument field-of-view in the instrument Y axis, i.e. the direction perpendicular to the vertical axis as used in keyword ANGLE. (2) (3)
PROG_ID=	(Optional). ID number specifying that this observation is part of a continuing series
CMP_NO=	(Optional). ID number of the coordinated observing program that this observation supports
DISTURB=	(Optional). Description of any possible disturbances
JITTER_LIMIT=	(Optional). Maximum amount of jitter allowable for this program and this instrument (in 1/10 arc-seconds)

Notes :

(1) String. The list of objects is provided below.
(2) This field can be repeated if nercessary. The value can be an array of n elements: elements separated by a comma, no blanks embedded.
(3) Units for coordinates are arc-seconds from Sun center and degrees from Solar North for angles.

ACTIVITY

The ACTIVITY entry is used to specify predefined activities that the ECS planning system knows about, that is that have been entered in the knowledge base. These activities typically have constraints associated with them that are checked by the scheduling system. The xyz which follows ACTIVITY is the name of the predefined activity.

ACTIVITY_xyz (1)

STARTIME=	Start time of the special activity
ENDTIME=	End time of the special activity
INSTRUME=	Instrument or group implementing the planned activity
AMOUNT=	(Optional). Should be specified for certain activities such as jitter (1)

Notes :

(1) Example for jitter: specify the amount of jitter generated by this activity estimated in 1/10 arc-seconds.

INST_IIE_MASTER and INST_IIE_RECEIVER

These entries are used to plan the role individual instruments in the Inter-Instrument Exchange (IIE). They are first included in the IAP for planning and coordination. The INST_IIE_MASTER entry is used by a given instrument to indicate that this instrument will be master for the specified period of time. The INST_IIE_RECEIVER entry is used to specify that an instrument will be receiver for the specified period of time.

INST_IIE_MASTER

MSTR_TYPE=	Type of flag
INSTRUME=	Name of the master intrument
MSTR_START=	The start time for the instrument being the master
MSTR_STOP=	The stop time for the instrument being the master
STATUS=	Acceptance status (1)

INST_IIE_RECEIVER

INSTRUME=	Name of a receiving intrument
RCVR_START=	The start time for the instrument being a receiver
RCVR_STOP=	The stop time for the instrument being a receiver
STATUS=	Acceptance status (1)

Notes :

(1) This keyword will only be present in the EAP. The possible values are REQUESTED, CONFIRMED, DENIED. If present in the IAP, it will be ignored by the ECS.

INST_NRT_SESSION

The INST_NRT_SESSION entry is used to specify that an instrumenter is going to be doing near-real-time commanding during a specified period of time.

INST_NRT_SESSION

STARTIME=	Start time of the requested near-real-time commanding activity
ENDTIME=	End time of the requested near-real-time commanding activity
INSTRUME=	Instrument which will have near-real-time privileges
IWS_ID=	Identification of the IWS from which the NRT commanding activity will be performed
CMD_RATE=	Expected average number of commands per minute between start time and end time
STATUS=	Acceptance status for this activity (1)

Notes :

(1) This keyword will only be present in the EAP. The possible values are REQUESTED, CONFIRMED, DENIED. If present in the IAP, it will be ignored by the ECS.

INST_NRT_RESERVED

The INST_NRT_RESERVED entry is used to request a reserved time slot for some special near-real-time commanding activities. This time is reserved for that instrument and no other instrument can request time during that period.

INST_NRT_RESERVED

STARTIME=	Start time of the reserved time NRT commanding activity
ENDTIME=	End time of the reserved time NRT commanding activity
INSTRUME=	Instrument which will have reserved time
CMD_RATE=	Expected average number of OBDH block commands per minute between the start time and end time
STATUS=	Acceptance status for this activity (1)

Notes :

(1) This keyword will only be present in the EAP. The possible values are REQUESTED, CONFIRMED, DENIED. If present in the IAP, it will be ignored by the ECS.

INST_DELAYED_CMD

The INST_DELAYED_CMD entry is used to specify a time window during which a group of delayed commands must be uplinked.

INST_DELAYED_CMD

EARLIEST=	Earliest uplink time
LATEST=	Latest uplink time
INSTRUME=	Instrument which will performed the delayed commanding
NUM_CMDS=	Number of obdh block commands to be uplinked

INST_TSTOL_EXECUTION

The INST_TSTOL_EXECUTION entry is used to specify a time window during which FOT will be required to execute a given TSTOL procedure.

INST_TSTOL_EXECUTION

PROC_NAME	Name of procedure to be executed by the FOT
EARLIEST=	Earliest execution time
LATEST=	Latest execution time
INSTRUME=	Instrument to which the procedure applies
DURATION=	Approximate duration for execution of the procedure (minutes)

FORMAT FOR THE ECS ACTIVITY PLAN (EAP)

The EAP will be available in two formats:
1) the keyword format, providing more flexibility
2) the fixed format, providing more readability

In addition to the keywords found in the IAP, the following keywords will be used in the EAP.

Keywords originating from CMS/FOT (Still to be confirmed)

DSN_Contact_xyz
The DSN_Contact_xyz entry provides information on a given DSN contact. The _xyz field represents the ground station name, for example, _CAN or _MAD.

DSN_Contact_xyz

STARTIME=	Start time of contact for this station
ENDTIME=	End time of contact for this station

SVM_Reserved
The SVM_Reserved entry is used to indicate time periods that are reserved by the FOT to perform activities exclusively related to the service module. During these time periods, all instrument-related activities are excluded: near-real-time commanding, uplink of delayed commands and execution of TSTOL procedures for instrument operations.

SVM_Reserved

STARTIME=	Start time
ENDTIME=	End time

Payload_Reserved
The Payload_Reserved entry is used to indicate time periods that are reserved by the FOT but during which some payload operations activities can be performed. These include uplink of instrument delayed commands and execution of TSTOL procedures for instrument operations

Payload_Reserved

STARTIME=	Start time
ENDTIME=	End time

Throughput_RCR
The Throughput_RCR entry is used to specify time periods during which the throughput channel will be opened, the instrument teams will be allowed to command in near-real-time and send RCRs.

Throughput_RCR

STARTIME=	Start time of throughput mode with RCR allowed
ENDTIME=	End time of throughput mode with RCR allowed

Throughput_NoRCR
The Throughput_NoRCR entry is used to specify time periods during which the throughput channel will be opened, the instrument teams will be allowed to command in near-real-time and but RCRs will not be permitted.

Throughput_NoRCR

STARTIME=	Start time of throughput mode with RCR not allowed
ENDTIME=	End time of throughput mode with RCR not allowed

Spacecraft_Maneuver
The Spacecraft_Maneuver entry is provided by the FOT for informational purpose. This will allow the instrument teams to be aware of the occurrence of spacecraft maneuvers that may affect the operations of the instruments.

Spacecraft_Maneuver	
STARTIME=	Start time of maneuver
ENDTIME=	End time of maneuver
NOTES=	Description of maneuver

Clock_Adjust
The Clock_Adjust entry is provided by the FOT for informational purpose. It will allow the instrument teams to be aware of upcoming OBT clock adjusts.

Clock_Adjust	
STARTIME=	Start time/occurence of clock adjust
TYPE=	Description of adjust/reset

TLM_Tape_Dump
The TLM_Tape_Dump entry is provided by the FOT for informational purpose. It will allow the instrument teams to be aware of planned times for tape recorder dumps.

TLM_Tape_Dump	
STARTIME=	Start time
ENDTIME=	End time

TLM_MDI_M
The TLM_MDI_M entry is provided by the FOT for informational purpose. It will allow the instrument teams to be aware of planned times for MDI-M downlink.

TLM_MDI_M	
STARTIME=	Start time
ENDTIME=	End time

TLM_MDI_H
The TLM_MDI_H entry is provided by the FOT for informational purpose. It will allow the instrument teams to be aware of planned times for MDI-H downlink.

TLM_MDI_H	
STARTIME=	Start time
ENDTIME=	End time

TLM_HR_Idle
The TLM_HR_Idle entry is provided by the FOT for informational purpose. It will allow the instrument teams to be aware of planned times for idle high rate telemetry.

TLM_MDI_Idle	
STARTIME=	Start time
ENDTIME=	End time

TLM_Mode
The TLM_Mode entry is provided by the FOT for informational purpose. It will allow the instrument teams to be aware of planned times for switching telemetry mode to low rate, medium rate, high rate or idle. The telemetry mode remains set to the current value until a new TLM_Mode entry changes it.

TLM_Mode

MODE=	LR, MR HR or IDLE
STARTIME=	The start time for this mode.

TLM_Submode

There are four TLM_Submode keywords that defines the start time for a given telemetry submode. This submode will remain in effect until it is modified by another TLM_Submode entry. The TLM-Sumode entries are input by the ECS operator once the weekly plan has been finalized. Since the FOT will be in attendance at the weekly and daily meetings, modifications to these entries by the FOT are not expected. There are four different telemetry submodes (1 to 4) applying to the medium and high rate telemtry modes.

TLM_Submode_1

STARTIME=	The start of mode 1

TLM_Submode_2

STARTIME=	The start of mode 2

TLM_Submode_3

STARTIME=	The start of mode 3

TLM_Submode_4

STARTIME=	The start of mode 4.

Other_Obs_xyz

The Other_Obs_xyz entry is used to describe other science programs and events which are of interest to the SOHO team. These activities will be input by the ECS operator interactively from the timeline editor. The possible keywords listed for this entry are similar to the SCIPLAN entry, and they will most likely not apply in many cases. The xyz field is descriptive of a specific event: it can be up to 10 alphanumeric characters, with no blanks embedded, but possible underscores. The Other_Obs_xyz entries may not be included in the IAP.

Other_Obs_xyz

STARTIME=	Start time of the support activity
ENDTIME=	End time of the support activity
TELESCOP=	Spacecraft or observatory implementing the activity
SCI_OBJ=	Scientific objective (1)
SCI_SPEC=	(Optional). More specific scientific objective (1)
OBJECT=	(Optional). Name of the object planned to be observed
OBJ_ID=	(Optional). Unique identifier for the object to be observed. Up to 6 alphanumeric characters, no blank embedded
NOTES=	(Optional). May include references to specific studies or rasters to be run. (1)
PROG_ID=	(Optional). An ID number specifying that this observation is part of a continuing series. Up to 6 numeric characters.
CMP_NO=	(Optional). ID number of the coordinated observing program this observation supports. Up to 6 numeric characters.
DISTURB=	(Optional). Description of any possible disturbances. (1).
DATE_MOD=	(Optional). Last date modified.

Notes : (1) Strings.

LIST of Possible Objects

ARC	arcade
AFS	arch filament system
ANE	anemone
AR	active region
BP	bright point
CR	coronal rain
CH	coronal hole
COM	comet
COR	corona
CHR	chromosphere
CS	coronal streamer
CT	coronal transient
CUS	cusp
DB	disparation brusque
DC	disk center
DFL	disappearing filament
DFX	disapppearing flux
DF	downflow
EFL	emerging flux
EPR	eruptive prominence
EFI	erupting filament
EVF	evershed flow
FAC	faculae
FC	filament channel
FLC	flux cancellation
FLG	filigree
FIL	filament
FLR	flare
FP	footpoint
FS	full sun
FL	flow
GR	granulation
HR	hedge row
JET	jet
LB	loop brightening
LE	loop evacuation
LMB	solar limb
LO	loop
CME	coronal mass ejection
MS	magnetic shear
MT	mercury transition
MW	moreton wave
NET	network
NL	neutral line
PC	polar crown
PCH	polar coronal hole
PEN	sunspot penumbra
PFL	postflare loops
PHO	photosphere
PLG	plage
POR	pore
PP	polar plume
PR	prominence
PLT	planet
QS	quiet sun
RIB	two-ribbon flare
SPR	spray

SG	supergranulation
SPI	spicule
SR	surge
SS	sunspot
ST	star
SW	solar wind
SYN	synoptic observation
TR	transition region
UF	upflow
UMB	sunspot umbra
VT	Venus transition
WAV	wave
WLF	white light flare