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Request

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Prime/Rider

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Summary-

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Legend

Help

This request revision is contained in a delivery and is frozen. Changes must be saved as a new revision.

Request Header

Description Observations Files Steps

Comments:

3

0

ID: RSS_016DI_MASS001_PRIME

 Title:
 RSS Dione Mass Determination
 Revision:

 Rev Created:
 19 May 2005, 11:48, by Rappaport, Nicole
 Priority:

Updated: 19 May 2005, 11:52, by Rappaport. Nicole

Start Time: 2005-284T11:02:06 GMT (GMB_E016_Dione -000T06:49:56)

Pre Start 000T00:00:00

Tolerance:

Post Start 000T00:00:00

Tolerance:

Duration: 000T02:01:56

End Time: 2005-284T13:04:02 GMT

Change: Revision 2

Change Revision 1: Made consistent with SOST on 3/7/02.

Justification: Revision 2: Per CCR of May 17, 2005.

Visibility: Public

SPASS Type: SPASS Rider (Collaborative: No)

Group Filter: SOST, SWG

Contact Info:

Description: This observation will be accomplished with continuous tracking for 4 hours on both

wings of the targeted flyby. Note that the outer wing has an Enceladus untargeted flyby, which will complicate the data analysis. We will track the spacecraft, so the HGA must be pointed toward Earth. We expect to have Ka-band downlink capabilities at all the complexes, so we will use at least X-X and X-Ka, and Ka-Ka if possible. We will get Doppler and ranging data. The use of Ka-band requires two hours of thermal stabilization, during which other instruments can control the pointing. The attitude of the spacecraft must be controlled by the reaction wheels from the beginning of the tracking to the end of tracking (from -10 to +10 hours), even though the radio science experiment will be interrupted to let other investigations make observations. The

requirement for a quiet spacecraft is to be determined after analysis of the Quiet Test in

APGEN Rate:

n

late 2001.

Request Description

Header Observations Files Steps

Pointing	Information
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Pointing: Primary axis = KABAND to Earth. Secondary axis is free.

Agreement:

Primary XBAND to Earth

Pointing:

Secondary POS_X to NSP

0

Pointing: Resources

Sequence Type: Background SSR Data Class: Normal

 Op Mode:
 RSS3/RWA
 Telem Mode:

 Power (watts):
 81.1
 Est CDS Words:
 200

Effective Rate: 0 bps Data Volume: $0 \times 10^6 \text{ bits}$

Frames: 0 Bits Per Frame: 0

Team Thermal cycling of the Ka-band Translator

Consumables:

Rate Multiplier:

IEB Text:

Apgen Field

Activity Type: RSS Activity

<u>Attributes</u>

<u>Parameters</u>

SSRDataClass:

Legend: RSS

CDSWords: 200

Duration: 000T02:01:56
Color: Khaki

Power: 81.1

Normal

Pattern: 0 - Solid Color
Description: see above

Green items are request fields shown here for clarity

Support and Other Descriptive Information

Liens:

Waivers: None

RTC: None

FSW Loads: No flight software.

ITL Request: None

Special DSN

DSN stations with Ka-band downlink and, if possible, uplink capabilities - DSS-25 if

Requirements: possible.

Special Requirements:

1) Thermal stabilization of the RFIS bay.

2) Attitude control on reaction wheels.

3) DSN station with Ka-band downlink and, if possible, uplink capabilities, with priority

to Goldstone because of the tropospheric calibration capability.

4) Quiet spacecraft - TBD

Support Imaging

Required:

Images of Dione taken by ISS will help decorrelate the mass from the distance at $\,$

closest approach.

Document References:

As Flown:

SASF Fields

Processor: SEQ Key: RSS

Workgroup: MSS_SEQGEN

Status:

Upper Label: Lower Label: Edit Group: Request State:

Associated Observations

Header Description Files Steps

Last Updated	Observation	Rev	Cmts
07 Mar 2002, 13:32	RSS Dione Mass Determination	2	0

Associated External Files

Header Description Observations Steps

File Name	Relative Path	Last Modified	File Size
RSS 016DI MASS001 PRIME.xfr	SOP_Implementation/s15_s16/port3/official/ck/	05 Mar 2003, 17:53	1687kb
RSS 016DI MASS001 PRIME.sfo	SOP_Implementation/s15_s16/port3/official/sfof/	05 Mar 2003, 17:52	24kb
RSS 016DI MASS001 PRIME.xfr	SOP_Implementation/s15_s16/port3/prelim/ck/	03 Mar 2003, 17:58	1687kb
RSS 016DI MASS001 PRIME.sfo	SOP_Implementation/s15_s16/port3/prelim/sfof/	03 Mar 2003, 17:57	24kb

Steps

<u>Header Description Observations Files</u>

Туре	Label	Name	Offset	Off-Type