

**Cassini Project Science Group
Meeting #69
June 20-24, 2016, ESTEC**

Please remember that each meeting has its own NASA VoTS leader and participant codes for telecon, and WebEx ID number for visuals.

Webcast (visual portion only): <https://jpl.webex.com/>, then **ENTER the meeting's WebEx ID number**

NASA VoTS Telecon numbers: toll-free from **NL: 0800-020-0351**; toll from NL: **31-20-716-8076**

toll-free from U.S.: 877-951-7311; toll from U.S.: 203-607-0666

(more countries listed on detailed agenda; for countries not listed, ask Karen Chan.)

Monday June 20	Tuesday June 21	Wednesday June 22	Thursday June 23	Friday June 24
<p>RADAR Team 9:00 a.m. - 5:00 p.m. Room: Newton 1 WebEx ID: none Telecon Participant code: 4416479 Telecon Leader only code: 87270</p> <p>RSS Team 9:00 a.m. - 3:00 p.m. Room: Ba030 WebEx ID: 925 893 564 Telecon Participant code: 2998904 Telecon Leader only code: 68034</p>	<p>Ring & Moon Composition Workshop 8:30 a.m. - 12:15 p.m. Room: Newton WebEx ID: 925 389 866 Telecon Participant code: 6601222 Telecon Leader only code: 60382</p>	<p>MAPS WG 9:00 a.m. - 1:00 pm Room: Newton 2 WebEx ID: 927 141 588 Telecon Participant code: 1437880 Telecon Leader only code: 59565</p> <p>Saturn WG 9:00 a.m. - 2:00 p.m. Room: Ba024 WebEx ID: 925 210 882 Telecon Participant code: 9307080 Telecon Leader only code: 66037</p> <p>Icy Satellites WG 9:00 a.m. -12:00 p.m. Room: Newton 1 WebEx ID: 926 873 051 Telecon Participant code: 2241676 Telecon Leader only code: 45687</p> <p>Rings WG 9:00 a.m. - 2:00 p.m. Room: Einstein WebEx ID: 924 095 737 Telecon Participant code: 9985660 Telecon Leader only code: 64471</p>	<p>Plenary Session 9:00 a.m. - 1:00 p.m. Room: Newton WebEx ID: 923 977 461 Telecon Participant code: 1994715 Telecon Leader only code: 94006</p>	<p><i>Open meeting time</i></p>
LUNCH	LUNCH	LUNCH	LUNCH	LUNCH
<p>CDA Team 1:00 p.m. -5:00 p.m. [NOTE NEW TIME] Room: Einstein WebEx ID: 926 305 211 Telecon Participant code: 5480117 Telecon Leader only code: 73823</p> <p>ISS Team 1:00-5:00 p.m. Room: Newton 2 WebEx ID: 925 944 974 Telecon Participant code: 6601222 Telecon Leader only code: 60382</p>	<p>Plenary Session 1:00 p.m. - 6:30 p.m. Room: Newton WebEx ID: 922 884 320 Telecon Participant code: 1437880 Telecon Leader only code: 59565</p> <p>-----</p> <p>Welcome Drinks ESTEC Wintergarden South 6:30 p.m.</p>	<p>Titan Working Group 2:00 p.m. - 5:30 p.m. Room: Newton 2 WebEx ID: 928 973 524 Telecon Participant code: 3195648 Telecon Leader only code: 17474</p> <p>-----</p> <p><i>Group Social Event</i> Bus from ESTEC: 5:30 p.m. Leiden Boat Tour & Dinner Bus to Noordwijk: 10:00 pm</p>	<p>Plenary Session cont'd 2:15 p.m. - 3:30 p.m.</p> <p>Executive Session 3:45 p.m. Room: Newton WebEx and Telecon information provided as required</p>	

CASSINI PROJECT SCIENCE GROUP MEETING #69
ESTEC, Netherlands
June 20 – 24, 2016

AGENDA

NASA VoTS Toll-Free Telecon Call-in Numbers:

from Netherlands: 0800-020-0351

from U.S.: 877-951-7311

from Italy: 800-977-455

from France: 080-510-2765

from Germany: 0800-800-1421

from Sweden: 0200-899-946

from U.K.: 0808-238-9817

For other numbers, please ask Karen Chan at karen.m.chan@jpl.nasa.gov

Then ENTER the meeting's **Telecon Participant Code** to join.

Webcast: WebEx: <https://jpl.webex.com/>, then ENTER the meeting's **WebEx ID number**

(this is visual portion only; you must call the *telecon* number above for audio)

(Cisco WebEx 24/7 support center: <https://support.webex.com/MyAccountWeb/supporthome.do>) or

contact Jo Pitesky at joeliza.pitesky@jpl.nasa.gov

*Please plan extra time to get through ESTEC security
before the first meeting you plan to attend!*

MONDAY, June 20, 2016

RADAR Team

9:00 a.m. - 5:00 p.m.

Room: Newton 1

WebEx: <https://jpl.webex.com/> / WebEx ID Number: none

Telecon*: from NL: 0800-020-0351; from USA: 877-951-7311

Participant Code: 4416479 / Leader Code: 87270

RSS Team

9:00 a.m. - 3:00 p.m.

Room: Ba030

WebEx: <https://jpl.webex.com/> / WebEx ID Number: 925 893 564

Telecon*: from NL: 0800-020-0351; from USA: 877-951-7311

Participant Code: 2998904 / Leader Code: 68034

CDA Team
1:00 p.m. - 5:00 p.m. [NOTE NEW TIME]
Room: Einstein
WebEx: <https://jpl.webex.com/> / WebEx ID Number: 926 305 211
Telecon*: from NL: 0800-020-0351; from USA: 877-951-7311
Participant Code: 5480117 / Leader Code: 73823

ISS Team
1:00 p.m.-5:00 p.m.
Room: Newton 2
WebEx: <https://jpl.webex.com/> / WebEx ID Number: 925 944 974
Telecon*: from NL: 0800-020-0351; from USA: 877-951-7311
Participant Code: 6601222 / Leader Code: 60382

TUESDAY, June 21, 2016

Ring and Moon Composition Workshop
8:30 a.m. - 12:15 p.m.
Room: Newton
WebEx: <https://jpl.webex.com/> / WebEx ID Number: 925 389 866
Telecon*: from NL: 0800-020-0351; from USA: 877-951-7311
Participant Code: 6601222 / Leader Code: 60382

1) Focus the discussion on the rings and close-in moons, maybe just the "rocks" and innermost classical moons, which might share parentage, with less focus on Titan, Iapetus, Hyperion, and the irregular moons.

2) Focus on aspects of composition that might provide hints to the origin and evolution of the ring-moon system (observational or modeling).

Planned agenda

Each slot below, including the terminal Discussion, is 20 minutes total.

O. Mousis	Origin of the Saturn ring-moon system (chemistry)
S. Charnoz	Origin of the Saturn ring-moon system (physics)
L. Esposito	Meteoroid pollution and internal mixing of ring material
P. Estrada	Meteoroid pollution and ballistic transport
R. Clark	Composition of rings and moons from UV to NIR spectra
G. Filacchione	Comparative analysis of ring and icy moon VIS-IR spectra
M. Hedman	Radial variation of particle composition from VIMS
A. Hendrix	UVIS and HST spectra of rings and icy moons
Z. Zhang	RADAR radiometry and the silicate-rich C Ring
F. Postberg	Non-icy material in the E ring delivered to moons & main rings
All	Discussion

The workshop is open to all Cassini PSG attendees.

PLENARY SESSION

1:00 p.m.

Room: Newton

WebEx: <https://jpl.webex.com/> / WebEx ID Number: 922 884 320

Telecon*: from NL: 0800-020-0351; from USA: 877-951-7311

Participant Code: 1437880 / Leader Code: 59565

Welcome, Introductions, and Objectives	L. Spilker	20 min	1:00
Local Arrangements	N. Altobelli/ M. Riemens	10 min	1:20
Program Scientist's Report	C. Niebur	20 min	1:30
Cassini Program Status	E. Maize	15 min	1:50
Spacecraft Status	J. Webster	10 min	2:05
ESA News and Updates	N. Altobelli	15 min	2:15
Science Planning and Sequencing Status	W. Heventhal	10 min	2:30
<i>Coffee Break</i>		<i>20 min</i>	<i>2:40</i>
F-Ring & Proximal Planning:			
Mission Planning Updates	E. Sturm	15 min	3:00
FRPO Science Planning Status	T. Ray	15 min	3:15
S97 First-Look (1 st F Ring sequence)	N. Vandermey	15 min	3:30
Capturing Cassini's Legacy: Mission Close Out			
Science Team & IDS Close Out Status	K. Weld	15 min	3:45
Non-Science Data Archive & Documentation	L. Morales	15 min	4:00
Key Inputs from Project Science	N. Alonge	10 min	4:15
Archiving Status	K. Weld	15 min	4:25
Media Relations Report	P. Dyches	20 min	4:40
Participating Scientist Introductions	PSs	15 min	5:00
Science Talks			
Enceladus H2 Update	H. Waite	30 min	5:15
Ring & Moon Composition Workshop Highlights	J. Cuzzi	30 min	5:45
<i>ADJOURN</i>			<i>6:30</i>

Welcome Drinks
ESTEC Wintergarden South
6:30 p.m.

WEDNESDAY, June 22, 2016

MAPS WG

9:00 a.m. - 1:00 p.m.

Room: Newton 2

WebEx: <https://jpl.webex.com/> / WebEx ID Number: 927 141 588

Telecon*: from NL: 0800-020-0351; from USA: 877-951-7311

Participant Code: 1437880 / Leader Code: 59565

1. Meet the Project Manager and Scientist (Maize/Spilker)
2. Mission TWT and F ring/proximal orbit planning update (Crary) including Trina's traveling road show (starting at 9:30)
3. MAPS Workshop report (Hansen)
4. Next MAPS WS and other MAPS related meetings (MOP, etc) discussion (all)
5. Homework assignments from Linda/Scott
 - a. Dual playback strategy
 - i. the desired dual PB interval and
 - ii. the floor, or bare bones minimum dual PB interval
 - b. Review the progress being made on FRPO planning, and flag any issues.
 - c. Review the current list of Lasts and Bests and update, as necessary, paying close attention to recently integrated activities.
 - i. predict the last Cassini magnetopause crossing
 1. Frank Crary: 2016-202 (July 20)
6. Gather and draft one or more nuggets for MAPS
7. Decide on MAPS science talks for Thursday's plenary session
8. Science presentations (those who missed the MAPS WS in Ann Arbor)
 - a. Sergis, Krimigis et al: Latest results on the Saturnian Ring Current
 - b. Gabby Provan: PPO's in the MAG data (via WebEx)
9. AOB

Saturn WG

9:00 a.m. - 2:00 p.m.

Room: Ba024

WebEx: <https://jpl.webex.com/> / WebEx ID Number: 925 210 882

Telecon*: from NL: 0800-020-0351; from USA: 877-951-7311

Participant Code: 9307080 / Leader Code: 66037

9:00 – 9:15 (15 min) Meeting Setup & Overview

9:15 – 9:45 (20 min, 10 min Q&A) Latest UVIS results regarding the detection of benzene in Saturn's upper atmosphere.

- Tommi Koskinen

9:45 – 10:05 (15 min, 5 min Q&A) What makes Jupiter's Great Red Spot Red?

- Kevin Baines

- 10:05 – 10:35 (30 min) Discipline Workshops, Books, and Special Journal Issues
 - Planed workshops/meetings (Anything for the next PSG?)
 - Status of the Saturn book
- 10:35 – 11:00 (25 min) Review of any “Lasts and Bests”
- 11:00 – 12:00 (1 hr) FRPO Planning
 - TWT Status Report
 - F-ring Jump-Start PDT/RBOT Analysis
 - Proximal Dual Playbacks
 - Lessons learned so far
- 12:00 – 12:30 (30 min) Planning for Thursday Plenary
 - Review
 - Nugget Status
 - Science Talk
- 12:30 Adjourn

Icy Satellites WG
 9:00 a.m. - 12:00 p.m.
 Room: Newton 1
 WebEx: <https://jpl.webex.com/> / WebEx ID Number: 926 873 051
 Telecon*: from NL: 0800-020-0351; from USA: 877-951-7311
 Participant Code: 2241676 / Leader Code: 45687

1. SOST update, including review of FRPO Integration Plans and Progress 20 minutes
2. Assess Proximal Orbit Dual Playbacks 15 minutes
3. Review and Update Lasts and Bests: 15 minutes
4. Identify Future PSG or Other Science Workshops 10 minutes
5. Science talks 90 minutes (talk agenda to be determined at meeting)
6. Decide on science talks for plenary 15 minutes.
7. Slack/other items: 15 minutes

Rings WG
 9:00 a.m. - 2:00 p.m.
 Room: Einstein
 WebEx: <https://jpl.webex.com/> / WebEx ID Number: 924 095 737
 Telecon*: from NL: 0800-020-0351; from USA: 877-951-7311
 Participant Code: 9985660 / Leader Code: 64471

0900: Assess Proximal Orbit Dual Playbacks: Finalize your discipline' assessment of the proposed Dual Playback plans occurring during the proximal orbits. For us the impacts mainly involve RADAR and ISS.

0945: Review FRPO Integration Plans and Progress: Review the progress being made on FRPO planning, and flag any issues. This is part of our usual RTWT and XDTWT reporting routine.

10:30: Science talks (20 min each nominal):

Brooks Far-IR spectra
Cuzzi Future RADAR/microwave modeling of ring composition
Tiscareno Propellers and wisps

11:30: adjourn for lunch (early by request of the organizers)

13:00: Remembrance: Andre' Brahic

13:20: Continue science talks

Buratti Rock phase curves (coordinate with SOST schedule?)
Deau Phoebe ring
Hsu Electrostatic levitation
Colwell Strong collisions releasing dust in the F Ring

14:45: Coffee break

15:00-15:15? Continue discussion from Tues AM Workshop

Other project items:

3. Review and Update Lasts and Bests: Review the current list of Lasts and Bests and update, as necessary, paying close attention to recently integrated activities. Please see if there are events we can tag for the project to advertise.

4. Identify Future PSG or Other Science Workshops: With less than 16 months remaining in the Cassini mission, please discuss timing and topics for future discipline and other workshops.

5. Provide Science Nuggets: Gather and draft one or more nuggets for your discipline.

6. Plan Science talks: Decide on science talks for your discipline for presentation at Thursday's plenary session (30 minutes per discipline).

Titan WG

2:00 p.m. - 5:30 p.m.

Room: Newton 2

WebEx: <https://jpl.webex.com/> / WebEx ID Number: 928 973 524

Telecon*: from NL: 0800-020-0351; from USA: 877-951-7311

Participant Code: 3195648 / Leader Code: 17474

1. TOST update, including review of FRPO Integration Plans and Progress 20 minutes

2. Assess Proximal Orbit Dual Playbacks 15 minutes

3. Review and Update Lasts and Bests: 15 minutes

4. Identify Future PSG or Other Science Workshops 10 minutes

5. Science talks 130 minutes (20 minutes per talk unless otherwise indicated)

- a. Alice Le Gall, M. Mastrogiuseppe, R.D. Lorenz, M.J. Malaska, M.A. Janssen, J.I. Lunine, T. Tokano, P. Encrenaz and the Cassini Radar Team (Almost) all about Ligea Mare, Titan
- b. Christophe Sotin, K. Lawrence, F. Marmuse, R. Brown and the VIMS team VIMS solar occultation observations during T116 and T118 – Implications for the characteristics of Titan’s haze
- c. Bob West, Pascal Rannou, Elizabeth Turtle, Jason Perry and Mou Roy The return of Titan’s detached haze layer
- d. Athena Coustenis et al. Changes of Titan’s stratosphere and surface from CIRS and VIMS data
- e. Zibi Turtle, Jason Perry, John Barbara, Bob West Cloud activity on Titan as northern summer approaches
- f. Steve Wall et al – (30 min requested) Radar images from Titan pass T120

6. Decide on science talks for plenary 10 minutes.

7. Slack/other items: 10 minutes

Total 3.5 hours.

Group Dinner
Bus from ESTEC: **5:30 p.m.**
Leiden Boat Tour & Dinner
Bus to Noordwijk: 10:00 pm

THURSDAY, June 23, 2016

PLENARY SESSION

9:00 a.m.

Room: Newton

WebEx: <https://jpl.webex.com/> / WebEx ID Number: 923 977 461

Telecon*: from NL: 0800-020-0351; from USA: 877-951-7311

Participant Code: 1994715 / Leader Code: 94006

Discipline WG Reports

Saturn WG Report	K. Baines	15 min	9:00
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MAPS WG Report	T. Gombosi	15 min	9:15
Titan WG Report	D. Strobel/J. Lunine	15 min	9:30
Icy Satellites WG Report	J. Lunine/L. Soderblom	15 min	9:45
Rings WG Report	J. Cuzzi	15 min	10:00
Cross Discipline Report	M. Evans	15 min	10:15
<i>Coffee Break</i>		<i>20 min</i>	<i>10:30</i>
Planetary Systems: From Historical Roots to the Contemporary Perspective	M. Blanc	15 min	10:50
Science Presentations & Discussion			
Saturn		30 min	11:05
Rings		30 min	11:35
Icy Satellites		30 min	12:05
Titan		30 min	12:35
<i>LUNCH</i>		<i>85 min</i>	<i>1:05</i>
Science Presentations & Discussion (cont.)			
MAPS		30 min	2:30
Discussion and Action Items	L. Spilker/ S. Edgington	15 min	3:00
Other Science Presentations (TBD)			3:15
<i>Adjourn & Coffee</i>			<i>3:30</i>

Executive Session
~3:45 p.m
Room: Newton
JPL WebEx and NASA Telecon info provided as required

FRIDAY, June 24, 2016

Open for additional working group meetings or workshops

Instructions on running WebEx on your laptop. The main basics are highlighted yellow.

Joining a PSG WebEx meeting on your personal computer:

1. go to <https://jpl.webex.com/> (note this is NOT JPL's "native" WebEx)
2. enter the meeting number found on the agenda Do NOT log in!
3. When asked to give your name and email, use your JPL/NASA email if you have one.
4. If you don't have a JPL/NASA email, and if you have problems logging in, use a made-up email that fits the [name@domain.something](#) format.
5. We use separate phone numbers for the audio portion of the meeting, so remember to call into the audio number shown on the agenda.

Presenting from your personal computer:

- Have the room host make you the presenter
- Click on "Share My Desktop" or ("Share Application") button (click on "Quick Start" tab at top, if you don't see the share button at center)
- Begin projecting meeting presentations as you normally would (e.g.-- open the PPT file, put screen into slideshow mode for in-person viewers)(or PDF, use "full screen").

During your presentation:

- Use the laptop cursor as a pointer—helps those online.
- Speak into the microphone, and repeat/summarize any questions from the room so those online can hear.

When your presentation is finished:

- "Stop sharing" the room computer desktop (click on the colored banner at the top)
- Hand control of the presentation to the next presenter, if you wish (otherwise, the room host will take care of that for you)

Troubleshooting

Getting rid of green "You are sharing your desktop" bar at the top:

- On Mac - command + option/alt + shift + h (all at same time)
- On PC - control + alt + shift + h (all at same time)
- You will be asked if you want to start clear-view mode. Click "Start"
- ESC gets you back out of the hide menu bar mode.

Audio interference/background noise:

- If the culprit isn't muting/hanging bring up a text application and type in large letters "WHOEVER JUST CALLED IN HANG UP".

Setting up Powerpoint so screen is mirrored (no presenter mode)

- On Mac – in Powerpoint, click on "Slide Show" on the tan band towards the top of the screen, then click on "Mirror Show" under the "Setting for Two Displays" towards the right hand side